official Diaries
1914 - 1918
Waldo L. Schmitt

One acc. of my Alaska stuff (11 research items is Acc. 53371)

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2nd Habitat Surv., Wash + Ore., pp. 106-108
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Haldo Schmitt.

His Book.

7a
60

=Pp. 3-121 of Diary. March & April

1

Fisheries Str. "Albatross".
Lower California Cruise, 1911.

For Hemenway Collection see page 33

D 5673 — 15 fms. Rgy; m. & c. mud & bag — 1090 fms.
Mar. 1, 11

1	Skate, 1 Macrurus.	1
	Dentalia,	8 or 10
		1
	Brachiopods,	8 to 10
	Tropkons,	several
	Hemicardium,	1
	(and small molluscs)	
	Shrimp.	3 species.
	Polystaches worms,	2
	Ophiurans and star fishes	several hundres
	Holothurians,	several
	Pycnogonids,	1
	Glass sponges (2 species)	number
	Ascidian,	1

Mar 2, 11. Arrived at the island of Guadalupe in the early morning, three boats were put over on the east side of the island near the abandoned barracks, while the ship stood away to the northward where another party was landed to hunt elephant seal supposedly extinct.

The party dropped on the east side, near the northern end consisted of Mrs Bartsch, and Rose and Stanley, Mr. Sonque, Mrs. Anthony, Osborn and Schmitt with full complement of men and equipment for quite a varied line of collecting.

Three species of birds, to the number of fifty were collects. The species were the "Guadalupe house finch", "Guadalupe wren" and "Guadalupe junco", in addition to which

mar. 2 (con) Mr. Bartsch noted a goldfinch and mate (Astragalinus sp.) Goats there were galore on the island, in fact the place is overrun with them, they occured as many as twenty-four in one close group. Of the goats one half grown one was brought aboard for meat and three kids to keep temporarily.

The dynamiting which was conducted by Mr Schmitt was not as successful as was hoped a few mullets, Xenocentrodi were caught as well as seven haemulids. The water on the whole was too deep and the current too swift.

Shells were collected by Mr Bartsch and Mr. Longue, seven species of land shells and about and equal number of marine among the a fine series of Haliotis the cracherodii, and Pachypoma fondosa several, and quite a number of other small shells. Sotica gigantea was also obtained.

The birds were collected mostly by messrs Anthony and Osborn, some by Mr. Bartsch and Mr. Longue.

Mr. Rose collected cacti and fine tree as well as oak specimens, Altogether he made quite a successful haul.

St. Stanley was a prime factor in securing an old bull elephant seal, lying on the shore near the old barracks. He was ably seconded by Mr. French.

The other party headed by Mr Townsend and St. Johnson, on the north side of the island secured five elephant seal, from a quite numerous herd. The herd was roughly estimated to contain some hundred members, including about thirty males.

mar. 2 (con) In addition to the live seals secured Mr. Townsend skinned a corpse on the beach. The birds skins and fishes were taken care of before bed time. Tomorrow further work is contemplated for the seal herd party with pictures to be taken by Mr. Bartsch as photographer, on his own willingness to aid the seal hunt in that capacity.

mar. 3. 1911. During the day the weather was too rough for shore work so preparing of the seals already killed and brought on board was undertaken. At night when the sea grew calmer the submarine light was used from the starboard gangway. Numerous polychaet worms were taken, two small eels, and three small fish.

Mr. Rose botanized some more, got 40 plants all told for two days.

mar. 4-11 Put to shore thru heavy surf, quite a party, two more seals were secured and skeletonized and numerous photos were taken of the seals still remaining in the rookery.

mar. 5-11 Sunday, worked all day getting things ready for shipping at San Diego, to which the started to return Saturday night.

mar. 6-11 San Diego. Films were developed and prints made. Arrangements made for getting rid of plunder and leaving Tuesday night.

mar. 7-11. Seals, pelts and skeletons were gotten rid of. Hand dredge hauls made from anchorage Five hauls made, some shells, a small crab, quite a number of tiny of fishes and a small urchin, (sand dollar) among the most noticeable.

mar. 8–11 D. 5674. 590 fathoms, dredging 6 hours about three hours all told. Though sounding seemed to promise much the haul was empty except for, fishes 1 Stenonidium, 2 Melamphaes, 1 Cydothone 1 Schizopod, a couple of salps, a star fish and a small shrimp. Clean haul except for a little blue mud, mixed with a little sand.

mar. 9–11 San Benito Group. With the exception of Mr Anthony the work of the forenoon was done on West San Benito Id., the afternoon was spent on East San Benito. Mr Anthony was on West San Benito the whole day. Mr. Anthony collected 9 San Benito Sparrows, 1 MacGregs House finch, 2 male Sparrow Hawks and one Rock Wren while Mr. Osborn, gathered in three clutches of osprey eggs and four lizards on West San Benito. On East San Benito he took about 10 San Benito Sparrows, 1 rocks wren and one Fraziers Oyster Catcher. Mr. Rose collected some twenty six specimens of cacti and other plants on West Id and twenty four on East Id. Mr. Bell did general collecting on both islands, getting for one thing a rocks wrens nest with three eggs, lizards were collected also, four specimens being obtained. Some shells were collected both land and marine as well as a few crabs and fish from tide pools. Mr. Tongue went out to West Id with a seining party, getting numerous small clupeoids and one sun perch. Some sea lions were observed by various members of the party.

mar 10–11 South end of Cerros Id. Here Mr. Anthony took one osprey, one female Running bird, one Horned Lark, and are wandering tatler. Mr. Osborn got a wandering tatler also one osprey, three Fraziers Oyster Catchers and one Black oyster catcher. Shells land and marine were taken here and several lizards, crabs, star fishes and sea anemones. Dr. Rose collected about forty species of plants; Mr Tongue also formed one of the shore party and notable among his collection was the jaw bone of a deer, proving the existence of that rare species once common to the island.

marsh. 11 North end Cerros Id. Shore work was again in order. Birds were collected as follows one Says Phoebe, several white throated Hummers and a couple of Hermans gulls. Very few shells were gathered, a large crab and opthuman, several lizards were collected by Mr. Bell and one frog in the water hole on the east side of the north end of the island.

marsh. 12 Off east side of Cerros Id. Seining was undertaken by Mr. Tongue, who collected, other than numerous smelt and anchovies, a Snakes Paralabrax, Hermosilla and several Girellas while numerous Paralabrax were taken on hand line over ships side. Boat dredging was performed with three and a half foot Sanner and a regular boat dredge. Shore collecting also was undertaken by all parties. Dr. Rose got thirty seven plants.

marsh. 13. Monday In B. San Bartholomé, Lower California. Shore collecting again in order. Mr. Athonys collection comprised, one Snowy Plover, two Least Sandpipers, one Semipalmated, one Zonotrichia, two Sage Thrashers and one Large billed sparrow. Mr. Osborn collected

Mar. 13 – Mon. one Herman Gulla, a large billed sparrow and one Spotted Sand-piper. Mr. Stanley brought in two black billed shear waters. Dr Rose tramped over hill and dale for cacti and in addition to some sixteen specimens brought in quite a number of land shells. Mr. Bell gathered lizards, land shells and fossils. Mr. Sonque when seining got numerous smelt and anchovies several species of sand sharks, quite a few large mullet, four pufferis, and about three rhinobatidae. Mr. Schmitt used the boat-dredge, tried out at Cerros, with moderate success.

Mar. 14. Sue. Shore collecting again a prime factor. Mr Stanley brought in the prize of the cruise since Guadalupe, a deer. Three coyotes were gotten by poisoning by Mr. Anthony who also collected one wood rat, one Peromyscus and four Paragnathus, comprising two species, four to five lizards, two beach sand-pipers, a horned lark a large billed sparrow and one raven as well as several land shells. Mr. Osborn brought in, two beach sand-piper, one large billed sparrow, one shore lark and two lizards. Mr. Bell three lizards. Mr. Sonque seined again on another beach, getting several sting rays, flounders, and sharks for preserving and many more lots fell not saved. Mr. Schmitt dredged outside of the bay in the morning getting several sponges and shells, and inside the bay in the afternoon, getting a few unknown in addition to several known species. Dr. Rose spent all day ashore getting plants.

Caught by E. P. Spruffler — On the hand line over the ship's side, two sea-fish, Stereolepis gigas. the first weighed 138 lbs, the second weighed 204 lbs. From the Colston fisherman were

Mar. 14 (con.) secured six turtles, the average weight being about 178 lbs. Used the submarine, but owing to the bright moon light got but five fish a few negalops a stage of the crab larva, and two small species of fish, and two small crabs.

Mar. 15. At San Cristobal Mr Osborn got a rhinoceros beetle and a royal tern. Over the ridge - a single fish was a black oyster catcher, a thick billed sparrow and a gull, which had black lumstone. On the dredge we caught an eel in its entirety A.1689. 18 Sharks average 1½ ft.

5 Isuarus, rough scaled.
30 " smooth "
24 " smooth bluish brown.
1 Hemichimera.
3 gr. Echini.
2 gr. Anemones.
25 Holothurians.
3 species of Starfish.
several Ophiurians.
5 sp. Crustacea.
about 25 Ascidians.
a few Worms.
Four Sea mice.
Sort of Nassa.
2 other species of deep-sea fishes.

Mar. 16 — Balenas Bay off Abrejos Point. Some boat dredging undertaken, many littoral species of marine shells obtained by Dr. Baetsch. Seine party under Mr. Sonque brought back several hundred kingfishes, Menticirrus, mostly small though several dozen were quite large, the largest measuring

1 ft. 9 inches. a few specimens of the Anchovia were caught, a Triakis, several hundred. Atherinops, a Uranoscopus, a dozen Pleuronichthys and one diamond flounder, Hyppsopsetta. Mr. Anthony got curlew, 3 willets, 2 blackbellied plover, a ringnecked plover, American killdeer, Surfbird, Royal Tern, an Elegant Tern, black turnstone a Raven, 3 Sanderlings, greater yellow legs, quite a number of sandpipers. Mr. Osborn got nine kinds not other than recorded above. Mr Rose collected two species of cacti, as well as several other plants. This landing place was said by the collectors to be the best ground yet, plentiful and varied. Mr Stanley shot fourteen willets, lot of small snipe, four large billed spanows and one raven. Mr. Osborn collected, 5 large billed spanows; 3 Beldings Marsh Spanows; 3 Semipalmated sandpipers; 1 least sand piper, 2 greater yellow legs. 2 Western willets; 1 Surfbird; 1 black turnstone, 1 Mexican Raven; 2 Sanderlings.

March. 17
Bottom
D. 1.02483
Surface
D. 1.02449

D. 5676; 645 fm; green mud, fine sand, globergina
Bottom Temp. 16 C° Sp. Gr. 24.6 } Taken in laboratory,
Surface " 18.3 " " 23.8 }

A few small mollusca; 9 crustacean orange red; 8 shrimps rough, coral red; 5 shrimps smooth, coral red; 2 Polychelas; 26 Hermit Crabs in company with anemones; 1 starfish; 10 fragments of Ophiurians; 1 Salpa; 3 Pennatulids 3 Medusae; 1 Squid; 10 large Holothurians; 2 small Holothurians; 4 worms, 2 species; 5 batfish malthopsis?; 1 Venefica?; 1 Halosaurus?; 1 Porogadus; 1 Raia badia; 3 macrurus. A clear bright sun-shiny day. Very little mud in mud bag.

Bottom
D. 1.02886
Surface
D. 1.02402

D. 5677; 735 fm. green mud, fine sand, globergeria
Bot. Tem. 18. Sp. Gr. 28.2 } Taken in laboratory.
Sur. " 19.1 " " 23.2 }

Fishes: 1 Venefica tentaculata; 2 small species. Invert: 3 purple holothurians; 2 large dark red Lithodes; 1 Polychelas, blind; 1 Galacantha; 1 Glyphocrangon; 1 scarlet shrimp; 17 small brown fine anemones; 1 salmon colored annelid 2 red ophiurians; 1 Venus ne dentalum; various small mollusca and foraminifera.

Mar. 18.-11

Sta Maria Bay. Mr. Anthony collected, 2 mangrove Warblers; 1 Yellow throated Warbler; 1 Sulfurcent Warbler 1 large billed spanow; 1 Great Blue Heron. Mr. Osborn brought in 2 mangrove Warblers, 2 large billed spanows; 1 Black chinned Spanow; Mr. Townsend secured a Frazier Green Heron. Mr Bartsch got 1 Black-chinned Spanow; 1 Sulfurcent Warbler; 2 White Throated Hummingbirds; 1 Xantus Jay. Mr. Longue with small seine obtained, 1 Weakfish; 5 Kingfish; 2 Squamipenna; 1 Genida; 3 Puffers; 2 Atherinops; 2 Sting Rays. Mr. Bartsch also brought in a number of crabs. A lot of Chlorostoma and Purpurea also Siliquaria and Lacuna and mussels. Mr. Schmitt made about 13 hauls with boat dredge and brought in quite a number of species of small mollusca. Mr. Rose brought in about 20 species of plants and several sea urchins

Mar 19-11

Just out of Magdalena, caught a yellow tail over the stern (Mr. Anthony trolling), Seriola dorsalis, 3' long. wt 15½ lbs. After being looked over by the officials of the place, we moved over to the northern side of Sta. Margarita Id. in the afternoon. Here a brief time was spent ashore. Mr. Anthony brought back a mockingbird. Mr. Osborn collected a Frazier Oystercatcher; 2 Hudsonian Curlews; 1 Baird

Verdin; 2 Plumbeus Gnatcatchers; 2 other Gnatcatchers. Mr. Townsend shot an Audubons Caracara and about six Gnatcatchers, while a member of the crew brought in other. Mr. Bartsch collected land and beach shells. The following list of species were secured, the numbers refer to the number of species of each genus represented,
1 sp. Oliva; 2 Murex; 1 Cassis; 1 Fasciolaria; 1 Fusis; 2 Strombus; 1 Oliva; 3 Cypraea; 1 Mgr. forceps; 1 Trochus; 1 Purpurea; 2 Conus; 1 Cruciculum; 1 Crepidula; 2 Nigrita; 1 Chlorostoma; 2 Cerithium; 1 Columella; 2 species Trivia; 1 Circa; 2 Cardium; 1 Venus; 2 Pecten.

Mar. 20-11 Mr. Longue in charge of a morning seining party returned with several large and a few small Ring fish; a guitar fish, numerous Hemiramphs, Anthemops and small flounders one large one about one foot six inches long. The largest Ringfish measured 1 ft. 9 in. The afternoon catch had in addition several huts full of jumping mullet as well as a dozen large crabs and several small Gerids. Mr. Osborn shot a Louisiana heron; 1 large billed sparrow; 1 belding marsh sparrow, while Mr. Bell brought in 2 lizards 3 Dark Buntings, and a Black Chinned Sparrow. Mr Osborn collected on mangrove Id. whereas Mr. Bell put in his time on Sta. Margarita Id. In collecting on mangrove Id. Mr Anthony secured 1 Kingfisher 3 White Ibis; 1 Amer. Bittern; 1 Yellow-crowned night Heron; 1 Cormorant; 2-3 Snowy Plovers; 4 Semi-palmated Sand-pipers and several sparrows of the genus Ammodramus. Mr. Anthony also secured from his traps on Sta. Margarita Id. 5 heotoma; 1 Peromyscus and 1 black tailed jack rabbit.

In addition there were obtained by various other members of the party
1 Pacific Godwit
3 Greater Yellow Legs
4 Reddish Egrets
4 White ibis
1 Mangrove Bird
1 Brazier Egrets Catch

Mr. Rose Collected
13 Plants on Sta Margarita Id. 4/

Mar. 21 Mr Anthony collected his traps from Sta. Margarita Id. preparatory to steaming for Magdalena and secured 3 heotoma and 6 Peromyscus.

D. 5678.

Among the fishes obtained in this dredge haul was a bullhead shark (Gyropleurodus francisci) and 2 specimens of Porichthys, know as midshipmen, besides numerous small flounders and snappers. A fair collection of molluscs was obtained as well as quite a number of hermit crabs, worm tubes and one starfish.

Shortly after the dredge haul the ship cast anchor off Magdalena, here the surrounding country was worked up. Mr. Osborn turned in 1 Baird's Verdin; 1 Grinnell's Water Thrush and 3 Black Chinned Sparrows. Mr. Anthony obtained 1 Brown Heron (the mature little blue?). Mr. Townsend secured, 1 Curlew; 1 Godwit; 2 Sparrow (Ammodramus). Mr. Bell collected one lizard and Rockwren. Mr. Rose brought back 10 species of plants from his foray on shore.

Mr. Longue in charge of an afternoon seining party in a few hauls caught 40 mullet and 60 kingfish as well as a large Haemulon, a large Gerrid and numerous small mullets and gerids. A Rhinobatus of the species previously caught was also brought in with the seine. The boat dredge was used in the afternoon for about 2 hours, a large Porichthys, a few starfish, shrimp and some shells were obtained

Mar. 22-11 D. 5679. (325 fms. 44°.3; dark green mud + foram) meager haul, 8 monomitopus; 1 small crab; 2 shrimp very few shells

D. 5680 (385 fms. °; dark green mud and foraminifera) 8 monomitopus and 1 sharks, a few shells.

D. 5681 (405 fms. (Nets Bottle refused to work. no bottom sample) monomitopus; sharks;

Mar. 23-11 Cape San Lucas. Mr. Anthony took 2 Pyrrhuloxias 1 quail; 1 kingbird; 1 each of 2 species of woodpeckers; 1 hummingbird; a flycather; 1 lark-sparrow; 1 lark bunting; 1 long-tailed owl; 1 Harris hawk; 1 Xantus jay; 1 mocker; 1 day colored sparrow. In addition noted, gulls, pelicans, ospreys, ravens, rock wren; cactus wren, verdin, gnatcatcher. ~~Cuthan Cafon~~ Cooper's hawk, few small lizards, snakes but no rattlers although said to be common here. Also noted Says phoebe, house finch, ground dove, man-o-war bird; hooded oriole. Dr. Rose collected sixty species of plants 14 of which were cacti. Electric light was used for about two hours at night, boat dredge during the day. Dr Barbich attended to the collection of beach and land shells, while Mr Jongue with a seining party, secured a caralla (Caranx hippos?), about a dozen pompanitos (Trachinotus sp.); a porcupine fish and several puffers. Mr. Bell secured several lizards. Osborn brought in 1 ♀ Rank bunting, 1 Pyrrhuloxia 1 Xantus Jay 1 Cactus wren; 1 Gila Woodpecker Arizona Hooded Oriole

Mar. 24. Another day at Cape San Lucas. Mr. Anthony secured 3 Heotonia; 3 Peromyscus; 9 Perognathus (2 sp. are of the spiny, the other of the true Per. form); 2 gr. tailed towhees, 2 Spizella (brewei?); 1 Xantus Jay, 1 hooded oriole; 1 flycatcher; 1 Zonotrichia (coronata?) While shore saw caracara, Cooper's hawk, osprey House finch, gold finch, mocker, hummer, woodpecker (several sp.) lark bunting; lark sparrow; Says phoebe, kingbird, cormorant, white winged dove Otocoris lencunus.

While shore party was out ship steamed a few miles out to sea for dredging. One haul was made D. 5682. 491 fm. bottom a finish of sand. Water bottle proved defective. Surface Sp. Gr. 24.2. Temp. 20.5.

Brought up. 28 smooth scaled macrus; 1 rough scaled macrus; 14 merlucia?; 1 Alepocephalus; 1 Argyropelecus; 1 blind Polyhelen; 30 Glyptocranges; 5 Heterocarpus; 36 Penaeus; 12 Acanthephyra. 6 Schizopods; 20 munidopsis; 2 qts small munida; 4 Plumularia; several hydroids; six sea anemones; 2 Star fish; 2 Echini; 6 Ophiurans 2 Crinoidian. Mr. Barthlow collected for the laboratory 1 dove; 2 quail; 3 woodpeckers; 1 green heads; 1 female oriole 1 mocking bird; 1 sparrow hawk; 2 ground squirrels. Dr. Townsend brought in 2 white crowned doves. 1 Carolina dove. 1 mocking bird 1 Cardinal; 2 woodpeckers. 1 white crowned sparrow 1 chipping sparrow. nest and eggs of verdin. Mr. Jongue secured by the seining about ten Sylo suras and several small species (mappers), and a making at night the electric light was used for about two and a quarter hours.

Dr. Rose gathered thirty four species of plants. Beach and land shells were taken by Dr Barbich

Mar. 24-11 Dr. Bartsch in addition collected the following birds. 1 Xantus Jay; 3 Lark sparrows; 1 Plumbeous cyanocephala 1 Pyrrhuloxia; 1 clay colored sparrow; 1 Gila woodpecker; 1 Kingbird. Mr. Osborn collection consisted of 1 Jack rabbit; 1 Antelope chipmunk 1 Paroquathus; 2 Cardinals; 1 Pyrrhuloxia; 1 Coopers hawk; 2 St. Lucas flycatchers; 1 Kingbird 1 Arizona Hooded Oriole 1 Western Lark Sparrow.

Mar. 25. Mr. Barthlow on a collecting along San Jose del Cabo returned with quite a series of specimens of which the following were retained, 3 Xantus Jays; 3 orioles; 2 woodpeckers; 1 sage thrasher; 1 ground dove; 1 St. Lucas flycatcher; 1 Pyrrhuloxia 1 caracara; 1 mocker. Dr. Bartsch and Rose together with Mr. Schmitt, went about three miles up the valley to a small freshwater lagoon where several rails and coots were noticed but not collected owing to lack of suitable fire arms. Dr. Rose secured 30 species of plants here as well as en route. Dr. Bartsch took a swallow and two yellow throats: Two species of fresh water shells were also obtained around the lagoon. Before sailing Mr. Anthony ran his traps at San Lucas, taking 2 heteromys; 2 Peromyscus; 6 Perognathus and 1 ground squirrel. At San Jose... he took, in the late afternoon a goldfinch and a clay colored sparrow. Mr. Anthony put out a line of traps about the same time

Mar. 26. Sunday at San José del Cabo. Today Dr. Rose gathered in forty-one plant specimens. Dr. Bartsch in charge of a shore party consisting of Mr. Jongeward Schmitt and Carl, with a seine and other paraphernalia obtained all told not less than six species of fish, three species of crabs, four species of birds, to wit 7 swallows; 1 pipit; 1 sparrow hawk; four sand pipers; and numerous photographs of the other birds of the region. Mr Barthlow on an early morning shoot took quite a number of duck, two of which were retained for skins. Dr. Townsend secured, 1 white winged dove; 1 ground dove; 1 Lower California flycatcher; 1 chipmunk; 2 cactus wrens 1 woodpecker; 1 white crowned sparrow and 1 Gambel's sparrow. At his traps Mr. Anthony took 12 specimens of Heteromys, Peromyscus and Perognathus, out of which only seven could be saved as the ants had spoiled the rest. He shot eleven ducks; gadwell scaup, shoveller; green winged teal.

Mar. 27. Afternoon in Pichilingue Bay off Govt coaling station. Mr. Anthony collected, 2 elegant terns; 1 mangrove warbler; 1 Lower California flycatcher; and 1 Wilson plover. Mr. Orbun took a Sepus insularis and two live lizards from the vicinity of the coal depot. Mr. Anthonys collecting was done on the mainland. Shore collected along the beach was done by Dr. Bartsch and Mr. Schmitt invertebrates being the object of the quest, numerous crabs and ophiurians were secured as well as some holothurians and mollusks and an isopod, the large black littoral species. Mr. Bell secured a mocker and a gnatcatcher. The electric light was put over in the evening; Shoe [illegible] many herring, numerous polychaet worms, isopods, and larval fish. On Pichilingue Island Dr. Rose collected sixteen specimens of plants.

4.50 Sunset

Mar. 28. Pichilingue Bay. Mr. Anthony in the early morning ran the traps he set out the previous evening; He took but one each of Peromyscus and Perognathus, and shot a jack rabbit. Thin excepting the dredging done by Dr. Bartsch and Mr. Schmitt with the boat dredge, was the only work done, as a general holiday was declared by everyone. Today Dr Rose got 20 plants

Mar. 29. A hard days work for all Hands. Mr. Anthony again ran his traps securing six Perognathus comprising two species, He also shot a quail, a cactus wren, and a green tailed towhee. Mr Barthow brought in 2 flycatchers; 3 St. Lucas Hous Finch. and 1 Gila woodpecker. Mr. Bell brought in four birds. St Lucas Flycatcher; Sonora California; woodpecker; Western Warbler. Mr. Osborn secured 2 St. Lucas Bronze finches (♀ and ♂), Belted Kingfisher; Cardinal; 1 Baird's Sandpiper. At La Paz Dr Rose secured eight species of plants.

Mar. 30. Dr. Townsend, while on the mainland in the early morning took 2 species of woodpeckers; a mocker; 1 flycatcher and the first live rattle snake yet seen on the trip. Mr. Anthony in running his traps took 3 Perognathus (2 species) and a Peromyscus; 1 Cardinal; Sonora California flycatcher; 2 Plumbeus gnatcatchers. After this early morning collecting at Pichilingue. The ship steamed to San Josef Id. arriving there in the afternoon. Here shore parties when out. Mr Anthony to set traps. He took at the same time four grebes. Dr. Bartsch secured some small mollusks. The ground was looked over generally. The submarine was used for about an hour and a half, numerous polychaet worms and small crustaceans being taken. A large school of fish, measuring up to about fourteen inches, were seen, but none could be secured either with the dish net or hook and line.

San Josef Mar 30 Dr. Rose 6 numbers

Mar. 31 Dr. Rose 26 numbers

San Josef Id. On running his traps early in the morning Mr. Anthony secured six Neotoma, Dr Townsend took 1 white ibis; 1 reddish egret; 1 osprey; 1 sand bird, several large Pinna; numerous starfishes of two species. The large species was Echaster. Mr. Osborn brought in 1 white eared hummingbird; 1 Traill flycatcher; 2 St. Lucas woodpeckers; 2 Sonora California flycatchers. 1 black throated sparrow. Mr. Bell collected a fine series of lizards peculiar to the island. Dr. Bartsch collected shells during the day. Mr. Schmitt undertook dredging with the boat dredge in the morning for about an hour making four hauls, completely filling the tubs taken along. Hauls consisted mostly of coral sand with several mollusks, starfish and a few small crabs and fish. Mr. Longue took out a seining party, securing about a dozen Fistularia; 2 porcupine fish; 1 Haemulon sexfasciatum six inches long; 1 sheepshead?; several dozen Henotetrus pectoralis, six large mullets, 12 Kyphosus analogus. Mr. Schmitt when out with the dredge-mining party in the afternoon bringing back; 2 Pachycapistratus (2 species); 6 Macrospathodon dorsalis; 8 Abudefduf saxatilis; 5 large Hyperoplus xanthogrammus; 4 large Hypsterocarpa, measuring about 18 inches and a dozen smaller from ten to six inches long; 1 grunt?; 1 sheepshead?; a Scarus, light cream color with pale blue markings and a Pseudoscarus, brownish on the upper parts fading to light below with fins and markings bluish green. Over the side was caught a large Scomberomorus sierra. Dr. Rose collected 46 species of plants and brought in large half beak, one of a school which shot out upon the sandy beach and could not get back into the water

Apr. 1. Afternoon in Agua Verde Bay. Mr. Anthony took 3 Phamopeplas; 3 St. Lucas house finches; 1 gila woodpecker; 1 running bird (Certia?). In early morning before leaving San Joseph'd. Mr. Anthony got with his traps 4 Perognathus and 1 Perodipus, picking up another Perodipus floating on the ~~sh~~ outlet to the lagoon. At Agua Verde Bay Dr. Rose collected specimens of local plants. Mr. Tongue with volunteer seining party ~~seined~~ guided a number of fish of which the following ~~forms~~ representatives were preserved Spheroides annulatus; Scombermorus sierra; Hematistius pectoralis; 1 Hynnis; Xyptema cinereum Trachinotus rhodopus; Sphyrena ensis, Platulaia Rhinobatus; Diacopyge. Mr. Bell seined several lizards. Dr. Bartsch and Mr. Schmitt seined the beach for invertebrates. Mr. Osborn took a Agua Verde, 2 cardinals;
~~Dr. Townsend~~ Dr. Rose seined 2 9 numbered plants

Apr. 2. Agua Verde. Apr. 2 Dr. Rose got 12 numbers. Spent the morning in Agua Verde. Mr. Anthony ran his traps getting one Perognathus and one heteromys and shot 2 swallows, 1 black headed grosbeak and a least flycatcher and brought back a live osprey. Mr. Barthlow brought in a gilded flicker and a Citellus tenuimus together with several other of the common species. Dr. Bartsch and Mr. Schmitt dredged about the bay making about a dozen hauls. At eleven o'clock left for Carmen Island. Carmen Id. Dr. Rose seined 19 numbers. Here the trappers put off each setting a line of traps. Dr. Bartsch and Mr. Schmitt again searched along the beach for invertebrates.

Apr. 3. Dr. Rose got 11 numbers. Mr. Anthony took this morning at Carmen Island, 2 wood rats; 3 Perognathus; 1 Peromyscus; 3 elegant terns; 1 cardinal; 2 black throated sparrows; Mr. Osborn took 1 Thedoma; 1 Peromyscus; 2 cardinals; a Brewer's sparrow; Bonaparte gull; 2 elegant terns; Mr. Bell seined. 1 mourning plover; 1 St. Lucas woodpecker; 1 Peromyscus; 2 live lizards. Mr. Tongue with the seining party (175 foot seine) seining, numerous small mackeroid fish, small herrings, gerrids, one small flounder, one small needle fish, 3 species of pampano and numerous small larval eels, many of which were found in the stomach of the Corvina mullet also in the catch. Mr. Schmitt with dynamiting party seined, 1 large labrid, 2 large Hynnis about one foot ten inches in length. 1 Kyphosis analogus, a dozen smaller Kyphosis-like fishes, 4 sea bass 2 Heniochus several dozen Pomacentrids, another of another species 6 small Chaetodons, 1 large Triggerfish and one large porcupine fish. Dr. Bartsch made hauls with the 3½ Tanner seining numerous small fish crustacean and mollusks as well as nine star fish. Dr. Rose in botanizing brought in 11 specimens.

Seining also brought in 3 large mackerel over 2 ft. long. and three sharks fish

Apr. 4 Sh. Rose 28 sts

Mulegé. Dr Bartsch and Mr. Schmitt used the boat dredge in the morning making eight hauls. In the afternoon Mr. Schmitt went out dynamiting for fish; two shots were made owing to the unsuitableness of the ground, but few species were gotten; a Hymnis; Serranid; Pomacentrid; and a Red Snapper. Mr. Jongue and seining party worked the lagoon, Mulegé River with 100 ft. Seine, getting the following species; 2 species of grunt; a weak fish; several kingfish; red snappers; numerous scombrids several species of macraloids, 6 Kyphosis, 2 species of gerrids; 2 moon fish, an electric ray, one sting ray. Dr. Bartsch attended to beach collecting in the afternoon. Mr. Osborn secured 6 House finches; 1 Bonaparte gull; 1 male Cardinal; 1 Clay colored sparrow: ~~Mr. Smith~~ brought in Anthony shot 1 Bonaparte Tern, 1 Red breasted Merganser; 1 Silky woodpecker and two Anna finches

Apr. 5. Sh. Rose 22 sts 16 specimens

Head of Concepcion Bay. Arrived at about 2 o'clock. Took boat dredge out and made about eight hauls up and down west side of Bay. Seining was attempted by Mr. Jongue but ground was found to be unfavorable. General shore collecting was done by other members of the expedition Mr. Anthony in running his traps at Mulegé took 1 Neotoma; 2 Perognathus; 1 Peromyscus. The electric light was used for about two hours. Only a few polychaet worms were taken.

Apr. 6. Sh. Rose 24 specimens

Dr. Bartsch used boat dredge in the afternoon after shore collecting in the morning. His dredging was largely performed on the eastern side of the head of the bay. Mr. Schmitt ~~of~~ was dynamiting, making thirteen shots, all told among species collected were numerous serranids, two species; triggers fish; small gerrids and a few red snappers (A1732-1732). Mr. Bell collected quite a few lizards peculiar to the locality and nest, eggs and adults (♂ and ♀) Baird's Verdin. Dr. Townsend, Messrs. Stanley, Anthony and Osborn went hunting Mt. sheep; a suffered new species; none were secured though tracks were found and a cattle herder reported that he had seen four the evening preceding.

Apr. 7 Sh. Rose 14 specimens

This morning moved down the bay to a point just off Ricason Id. Mr. Bell ran the traps he had put out the preceding evening, getting two Peromyscus; while out he collected 3 flycatchers; 1 cardinal; 1 Baird's Verdin, and several lizards. Dynamiting party with Mr. Schmitt, made six shots in the morning, the water being too rough in the afternoon, two species of parrot fishes, one of Haemulid; two species of serranid; many trigger fish, several Hymnis, a few small mullet, some gerrids. Mr. Jongue took a party out with the

Apr
Sh. R

hundred and seventy-five foot seine, making three hauls; several mullet and gerrids were brought in. Sh. Bartsch went out with the ~~hand~~ boat-dredge, making seven hauls of varying time, quite a lot of characteristic bottom material was obtained. Sh. Townsend and Mr. Anthony went out hunting again. Mr. Anthony used his auxillary and secured 2 white winged doves; 1 lazuli bunting and a blackheaded grosbeak. Sh. Bartsch secured pictures of adults and nest and eggs of Thrasher ~~opticatheri~~

Apr. 8 morning at Concepcion Bay off Ricasoncito. Sh. Townsend and Mr. Anthony went sheep hunting again secured none but saw one young sheep but were too far away to make a shot. Mr. Bell and Osborn ran traps and obtained, one dark colored heetoma, a large silkly Perognathus; 2 smaller more spiny Perognathus and 1 Peromyscus. Mr. Schmitt with dynamiting party made five shots in the morning, only floaters were secured as the wind rendered the water too rough for spearing; a Heniochus; several pomacentrids two species of small serranids. Mr. Tongue and seining party made three hauls with 175 seine and obtained several small yellow tails and gerrids, the bottom being too rough for very successful hauling. In the afternoon the anchor was gotten up for the return to Inylegé where evening was spent after health papers were gotten cleared out.

Apr. 9. Arrived in San Francisquito Bay at 2 o'clock. Shore parties were put off. Mr. Anthony and Mr Schmitt ~~when~~ went dynamiting about eight large hygetoperca, several dozen large Angel fish, a few small pomacentrids, 2 red Apogons and a small red Scorpaenid were obtained. Mr. Anthony set out his line of traps and while doing 28 numbers inclusively Sh. Rose. many large Bervë ~~Bass~~ were ~~se~~ secured. Violet green swallow ad while observed ~~by~~ dynamiting secured a Brewsters Egret. Mr. Osborn netted ~~them~~ brought in a large billed ~~Spar~~ sparrow, ~~obtained~~; 1 ~~did not obtain~~ interior Rule Wren. Electric light was lifted from water used for about 2½ hours, two squid and some fine plankton obtained.

Apr. 10. Traps were run in the early morning. Mr Bell of San Thomas took from Perognathus; Mr. Osborn a Perognathus cinquilobus and a Perodipus; Mr. Anthony, 2 Peromyscus. Sh. Rose and Sheni; the forenoon steamed for Angel de la nine species. Guardia Id. arriving in the early afternoon. Here shore parties were put off. Mr. Osborn obtained 1 lizard, white ~~throated~~ shrike; Mr. Anthony took 1 ~~B~~ burrowing owl; 1 Great Blue Heron (one of the largest as it conforms to the maximum dimensions given; 1 Ten minutes Royal Tern; 1 Elegant Tern; Sh. Townsend secured were taken by Sh. Rose at a freak or two of large lizards; and several rattlers Angel de la Mr. Bell assisted Sh. Townsend on his reptile Hunt. Guardia Id. Sh Bartsch took out the boat dredge, making eight hauls. Mr. Schmitt ~~other~~ went out with dynamiting party, making about five shots, securing about sixty hygetoperca pandalis averaging 2 feet 4 inches in length and 15 lbs in weight; four large California Jewfish the largest measuring 4 feet 6 inches and weighing 70 lbs; 2 large Balistes ~~vetula~~ polylepis ~~and one~~ 2 Bull head sharks; 1 hygetoperca rosacea? Seining party went out but failed to find suitable seining ground due to rocks and coral heads.

(Apr. 11
Dr. Ross 40
number

Bell 4 mice

morning until 9 o'clock off Angel de la Guardia Id. Traps were run. Mr. Anthony secured 1 dwarf horned owl; Baird's Verdin; 1 Hectoma; 2 Peromyscus. Mr. Osborn 2 white rumped shrikes; 1 Iguana. Dr Townsend and Mr. Bell secured nine lizards, alive and two live rabbits.

Arrived at Tiburon at about 3.15 in the afternoon. Shore parties were put off shortly afterward. Mr. Bell collected lizards, Mr Anthony set out an extensive line of traps. Mr Osborn secured two Bonaparte gulls in summer plumage; 1 Amer. Merganser; 2 Sower California Flycatchers. Mr. Tongue with seining party (175 foot seine) brought in about 36 large mullet and a dozen puffers. Mr Schmitt and dynamiting crew secured 8 myatophesa; 1 Puffer; 3 Balistes polylepis and 1 Kyphosis. The submarine light was tried at night but the current ran too strong for successful work.

Apr. 12. the running traps Mr. Osborn secured 1 Perognathus and Mr. Anthony, 1 live Perodipus and 3 dead ones, while eleven spoiled ones were found of which 9 were Perodipus and 2 Perognathus. Mr. Osborn secured 1 Pyrrhuloxia; 1 Sinaloa sparrow; 2 Sower California flycatchers. Mr. Bell took 4 Sumnster; 3 surf birds; 2 Sower California flycatchers; 1 Cactus wren 1 large billed sparrow; Other members of the party brought in 1 Phainopepla; 1 Ringnecked plover; 1 Large billed sparrow; 1 Cactus wren; 1 Gilawoodpecker 1 Black-tailed Gnatcatcher. The seining party was unsuccessful owing to the unfavorable nature of the beach. The dynamiting party secured 1 Balistes; 16 large Hermosillas (Pomacanthidæ); 3 Calif sea bass fish; 6 myatophesa; 1 small sting ray. At night Mr. Bell put out ten poisoned baits. Dr. Townsend secured a doe, during the afternoon while Mr. Stanley secured a buck weighing 121 lbs after the entrails had been removed.

Apr. 13 morning spent at Tiburon. Mr. Bartholow secured 2 large Jack Rabbits and a land tortoise. Mr. Anthony took a Jack rabbit; 1 Anthony's Towhee; 1 Crissal Thrasher; 1 Perognathus. Mr. Osborn obtained a Gila Woodpecker and 1 St. Lucas woodpecker. In afternoon ship moved over to San Esteban Id. where Mr Bell collected numerous lizards of two species Sauromalus and . Mr Tongue secured 2 Black throated sparrows; 1 S. California flycatcher 1 Brazier Oyster Catcher.

Apr. 14 Morning at San Esteban. Most of the party went ashore to secure lizards. Mr. Barbat gathered three dutches of gull eggs, of California gull. Lizards of two species were collected as follows.

2 mi. from San Esteban Bay Bell . . .d

Apr. 16 Ill spc. fam. pomacentrids + chaetodons, many red Apogons, a Pseudoscarus 29" long. 1 Dematolepis punctata 30" l. 6 Histulariadepressa numerous Kyphosis analogus, Hygleriperca pardalis, several dozen Xenomus punctatus stink fish. numerous trigger fish, several Holocanthus

Apr. 15 Spent in Guaymas. Owing to unsettled state of affairs due to revolution no shooting or dynamiting was allowed. No collected was done.

Apr. 16 Morning at St Catalina Isl. Mr. Bell collected about a dozen lizards. Mr. Orton obtained 2 black throated sparrows; 1 Sonora Calif. woodpecker. Mr. Townsend secured 1 Thayer Oyster Catcher. Mr Anthony got 1 black throated sparrow. Bell 2 birds + lizards at Santa Catalina.

Afternoon at Santa Cruz. ~~Catalina~~ Mr. Rose picked up a dead Peromyscus. Mr Townsend secured ~~about a half dozen fish~~ 5 and whale skulls. Spm. several Holocanthus, hyleriperca a few Apogons and an electric ray. + carpet of pomacentrids

Apr. 17 Pichilingue Bay. Mr. Osborn went ashore and returned with 3 elegant Terns. Mr Barthlow secured a grey jack on the mainland Bell 13 lizards
Hyp. sword Goatfish, Pachygnathus, Holocanthus several Haemulids & red snappers, cerithe... ...
Panacantids + Ctenogams

Electric light 2 lamps. 1 set Gerald wire aerials 2 chronometers

Apr. 18. Party was sent Espiritu Santo 3d. Mr. Anthony took a black jack; 1 dwarf-horned owl; 2 Citellus
Apr. 19 Bell took in his traps 1 heterona and 5 Pseudo-gnathus. Mr. Anthony secured 2 more Citellus and 1 St. Lucas swallow. Mr. Osborn secured 2 dotted Canyon wrens; 1 black throated sparrow; 1 Xantus hummer; 1 Brewers sparrow; 1 large lizard; several beetles.
Picked up shore party at Espiritu Santo in the morning, and left for Ceralbo 3d after 9h. Townsend visited the pearl oyster hatchery He secured several clusters of spat and about a dozen adult shells, as well as representative specimens of pearl oyster enemies, i.e. porcupine fish (2); sea urchins; star-fish and several small crustaceans.

At Ceralbo 4hrs. 2 Sabrids, a Chaetodont Sergeon fish + Holocanthus, yellow Puffers yellow tail.

Apr. 20 Dropped Osborn at San Jose de Cabo, whence the ship steamed to a point of Cape San Lucas where D. 5683 was made in 630 fm.

Bottom — Bot. Temp. 25.00 — Sur. Temp. 23.5
D. 1.02329 — Sp. Gr 21 — Sp. Gr. 23.2
Surface
D. 1.02511 Bottom gravel, coarse quartz sand and green mud probably globergerinal ooze. Haul contained 1 macrurus; 2 melamphaes; 1 malthopsis imm. 1 Serrivomer; 1 Alepocephalus 14" l. (Cast.) 1 Sebastolobus alascanus 13" l. (Cast.) 5 Gnathophausia; 9 Glyphocrangon; 2 hephretopsis; 3 Galacantha 1 Polycheles; 1 munidopsis; 8 Penaeus; 3 other sh.; some deep sea sponges; 3 holothurians 18 shells representing 6 species; 6 sh. worms; 1 fragmentary sea urchin.

Normal tag from here on.

Apr. 21. D. 5684 sounding wire broke at splice 2 fm. from end and all gear was carried away on the haul in. Bottom in struck at 1760 fm. Dredge haul brought up 1 Scopelengys? L. 21"; 1 munidopsis?; 2 sp. red prawns; 7 Ophiurians 1 star; 1 Dentalium; 12 Holothurians 3 sp. 9 sea-urchins (Cystechinus) 2 pennatulids; 1 large pycnogonid; 2 qts. black nodules; 2 kinds of worm tubes.

D. 5684. (1760 fm. Sounding wire broken instrument carried away.

Bot. Mk S. Co. Nansen bottle failed to work.

Stn. 22 D. 5685 – 645 fms.
1 star; 2 ophiurians; 1 urchin; 1 tyanogonid; 26 hermits; 12 Munidopsis; 6 Polycheles; 2 Schizopods; 15 Glyphcrangon; 2 Aristaeus; 5 other species a few of each; 2 Sithodes panamensis 8 Nephropsis; 6 shells; 5 Holothurians; 1 Penatulid; 4 species of worms; 1 lot of nodules 1 lot of glass sponges. 1 Harpiota; 1 malthopsis, 1 Alepocephalus; 1 Melamphaes; 1 Serriorus Water cup didn't work, Thermometer registered 2 ° which was wrong direction.

D. 5686 – 930 fms. gn. tn. Glob.
2 sp. of stars 1 ff.; 3 sp. of ophiurians 1½ pt. 3 kinds worm tubes 1 holothurian; 2 sea anemones 1 Argyropelecus; 1 hermit; 1 shrimp; 1 small crab; 2 ascidians.
Water sample lost.

Stn. 23 Put into P. San Bartholomé this morning used 250 ft. seine, secured 3 kinds of mullet, while 45 Sriakis, 15 Galeus, 15 Rhinobatus and 17 Sting rays were left on the beach. In addition quite a number of Cinostrea (2 species were secured, several Umbrina and about 12 Mentachirus, a few gerrids, and several Hemirilla.

Bottom D. 1.0248 Surface D. 1.02379 In early afternoon D5687 – 480 fms. 3 shrimps; 2 ascidians; 1 Ophiurian; 2 worm tubes; 1 sponge; 2 Sea anemones. 1 Melamphaes; 1 Hemicththys; 1 Macrurus; 1 Scopelengys and 2 small fragmentary fishes, small rocks

Bottom D. 1.02482 Surface D. 1.02424 Late afternoon on Rander bottom D. 5688 – 525 fms. 5 Alepocephalus 18"ll (largest) 14 macrurus; 1 Melamphaes; 1 Sithodes 3 Nephropsis; 1 Polycheles; 1 Munidopsis; 20 large red prawns; 1 Anemone; 1 jelly fish; 1 Alcyonarian; 2 large Ophiurans; 1 qt small ophiurians. 1 star; 3 holothurians a number of rocks. Mud sample was quite hard and lumpy but of same character as preceding although there was much more mushy.

D5687 gn. tn. Glob.
Bottom { Temp 14.9, Sp. Gr. 24.8 } Surface. { Temp. 15.7, Sp. Gr. 24.0 }

D. 5688. gn. tn. Glob.
Bot. { Temp 12.0, Sp. Gr. 25.3 } Surface { Temp 15.5, Sp. Gr. 24.1 }

P.89 gn. h. fine S. Glob.
Bott. Temp. 11.5 Surface Temp. 14.2
Sp. gr. 26.2 Sp. Gr. 24.1

A Apr 24 D 5689; 679 fm.
Bottom 1 macrurus large; 1 macrurus small. 2 anemones
D.1.02564 few crimson prawns 3 sp.; 2 munidopsis
Surface numerous worms and tubes, few holothurians 2 sp.
D.1.02348 4 Dentalium; 1 urchin; 2 sp. stars;
numerous ophiurians two kinds little mud

Bottom D. 5690 – 1101 fm.
D.1.02476 12 Glyphocrangon. 3 munidopsis 1 large
Surface scarlet prawn; 3 hermits. about 5 sp. starfish
D.1.02385 few specimen; 15 small shells; 25 Dentalium
2 sp. ophiurians; 1 sp. soft worm tubes.
1 dozen holothurians 5 sp. Bottom gray
mud ... amphipods. soft

D.5690 gn. h. Glob.
Bt. Temp. 11.6 Surface { Temp. 14.5
Sp. gr. 27.8 { Sp. Gr. 23.9

gn. h.
Bott. Temp. 11.8 Surface Temp. 14.6
Sp. Gr. 26.2 24.0

Apr. 25 D. 5691 – 868 fm.
Bottom 1 Cyema; 1 Argyropelecus; 1 melamphaes
D.1.02563 ½ doz. stars; 24 dentalium; 2 brachiopods
Surface 2 other shells. 20 holothurians 2 sp. numerous
D.1.02397 soft worm tubes and worms, numerous
little stars, several anemones or worm tubes
1 munidopsis; 2 red prawns; 1 silicious sponge

Bottom D. 5692. 1076 fm. Apr. 25.
D.1.02534 1 harceter; 1 macrurus large 1'10" l. 2 small
Surface macrurus; 1 Porogadus. 1 melamphaes 1 other sp.
D.1.02362 few crimson prawns 5 sp.; 1 large tyroglyphid
numerous soft tubes with worms several
ophiurians 2 sp. several stars 2 sp.

gn. h.
Bott. Temp. 12.2 Surface Temp. 15.0
Sp. Gr. 25.8 Sp. Gr. 23.6

Thermometer Corrections. San Francisco Health Bureau

Therm. No. 5004

2.1°C	= 0
4.0	0
8.3	+ 0.1
12.1	+0.2
17.1	0
20.2	−0.4
27.0	0

Interpolations

+.1 +.125 +.150 +.175 +.2 +.17 +.14 +.10 +.07 +.035 +.0 −.2 −.4 −.35 −.29 −.23
8; 9; 10; 11; 12; 13; 14; 15; 16; 17; 18; 19; 20; 21; 22; 23

-.4 -.35 -.29 -.23 -.17 -.11 -.057 -.0
20; 21; 22; 23; 24; 25; 26; 27

Urine became slack bisulphide & brake
4 Sm lost instrument

Apr. 26. D.5693. - 451 fm.
20-25 large rose colored Sebastes, largest 10" l.
3 macrurus; 2 Antimora largest 10½"
1 large Sebastes; 3 Bythitidae; 1 Melamphaes
1 Lycodid.
1 large red Lithodes crab. 1 Anthomastus
2 dg. Large holothurians; 1 purplish squid 10" l
many sponges. 5-6 sh. 2 Ostella few small
crabs. 2-3 sh. few red prawns. few
ophiurians and stars. 2 Pennatulids - few
Nephtheae and anemones.

gn. lw
Bott.
Temp. 14.00
Sp. Gr. 25.00
Surface
Temp. 14.0
Sp. Gr. 23.9
Bottom
D.1.02483
Surface
D.1.02377

D. 5694. 690 fm.
1 Alepocephalus; 1 mottled flounder; numerous
rose red Sebastes, numerous macrurus, numerous
Physes. 1 Lycodid; 1 large skate; few
small fish; ~~1 Alepocephalus~~
1 large Lithodes; many & very large stars
4-5 sh. many small stars - 4-5 sh. numerous
red prawns several sh. several small
pennatulids. many ophiurians, several sh.
several anemones; crabs; 1 very large
Polycheles, several brachiopods; 1 squid
several small shells.

gn. S. Glob.
Bot.
Temp. 11,0
Sp gr. 25.3
Surface
Temp. 13.0
Sp. Gr. 24.2
Bottom
1.02466
Surface
D.1.02381

D. 5695. 534 fm
6 extra large macrurus largest 2'4" several.
Physes, several rose red Sebastes 1 marbled
flounder 1 Myxine; few other small fishes
5 large red Lithodes 2 sh. 3 pennatulids
3 Crinoids. several shells. several spatangus; 2
many
~~several~~ large Holothurians, ophiurians
nn. crabs. 1 octopus 2-3 sh of anemones.

D. 5696 {Bot. 1.02438 / Surf. 1.02340}
D. 5697 {Bot. 1.02478 / Surf. 1.02360}

Apr. 27 D. 5696 440. No bot sample, shot did not drop.
Bot.
Temp. 10.5
Sp. Gr. 25.1
Surface
Temp. 12.2
Sp. Gr. 23.9.
3 hag fish (Myxine); 2 flounders; 1 Sipunid
1 hake, 1 young shark; 1 lycodid; 1 Senicornus
numerous Sebastes; 2 large red crabs
several pennatulids, several sh. actinians
several sh. of crabs. few red prawns; few
sea urchins, few star 3 or 4 sh.

Bot. Temp. 11.8
Sp. Gr. 25.3
Surface
Temp. 12.5
Sp. Gr. 24.0
D. 5697 485 gn. lw. blk S.
1 large flounder; numerous Sebastes largest
10" l. 1 resembling Senacornus; 2 Myxine
2 Chauliodus; 1 Bythitid; 6 holothurians
4 sh - Large starfishes; 2 qts sea urchins
few shells shrimps, anemones, worms.
99 1 purple octopus with webbed arms 1 diam

Bot.
Temp. 11.9
Sp. Gr. 25.0
Surface
Temp. 12.0
Sp. Gr. 24.0
D. 5698. +475 No bot sample shot did not drop.
2 large macrurus largest 2'l numerous Sebastes
1 Myxine. several large stars 2 sh. 1 large
pennatulid; few small crabs, ophiurians
anemones, holothurians; 3 large rough
actinians largest 4in in diam 1 squid
of peculiar form body very large.

Bot. Temp.
13.9
Sp. Gr. 24.9
Surface
Temp. 12.0
Sp. Gr. 24.2
D. 5699. 659 ~~675~~ fm gn. lw.
numerous Sebastes, several macrurus 1 flounder
1 Senacornus?
numerous large stars 3 sh.; ophiurians
shells. few brachipods; numerous small crabs
few holothurians, actinians, aphrodite
worms.

D. 5698 {Bot. 1.02450 / Surf. 1.02451}
D. 5699 {Bott. 1.02471 / Surf. 1.02373 ~~1.02471~~}
For thermometer corrections see page 33.

Chugnik Biological Survey. 1911.

#108154

38.8 F	−0.3
41.2	0
48.0	0
55.5	0
63.0	0

Date 1910	Bureau of Fisheries. Travel Order No. 99	No. of transportation request	Sub's Voucher number	Amounts. ℔	¢
Jan. 4	Woodward Hotel board and lodging b. Jan. 2 to 5 Jan inclusive 2½ days @ $2 per day.			×	5.50

The U. S. to Woodward Hotel Dr.

1910	Articles delivered or services performed	℔	¢
Jan. 4.	Board lodging, breakfast Jan. 2 to 5 after Jan. 4 inc. 2¾ days at $2 per day	5	50

Rec'd. at N.Y. City, 4 John Smith, this 4th day Jan. 1910 the full amt of the above acct. Woodward Hotel Co. per John Woodward Prop.

June 15. Collected in two streams to southwest of Camp Porterfield. Followed the windings of each for about ¼ to ½ mile but saw no fish. Used plankstonic dip net, made of bolting silk meshes to the inch, made several dips of about 2 min duration each.

First stream near E. Base, looked clear but silt was deposited in each haul, bottom very sandy and muddy. Very little evidence of life.

Second stream, nearer W. Base, clear more or less gravelly bottom, less sand and mud than first, life though not very evident to naked eye was plentiful in scoop net.

25 fm. 2½ in. mesh 75 m. deep gill net set at 10 a.m. Johnstone found two small salmon fingerlings cast up on beach with drift, and brought in a few snails.

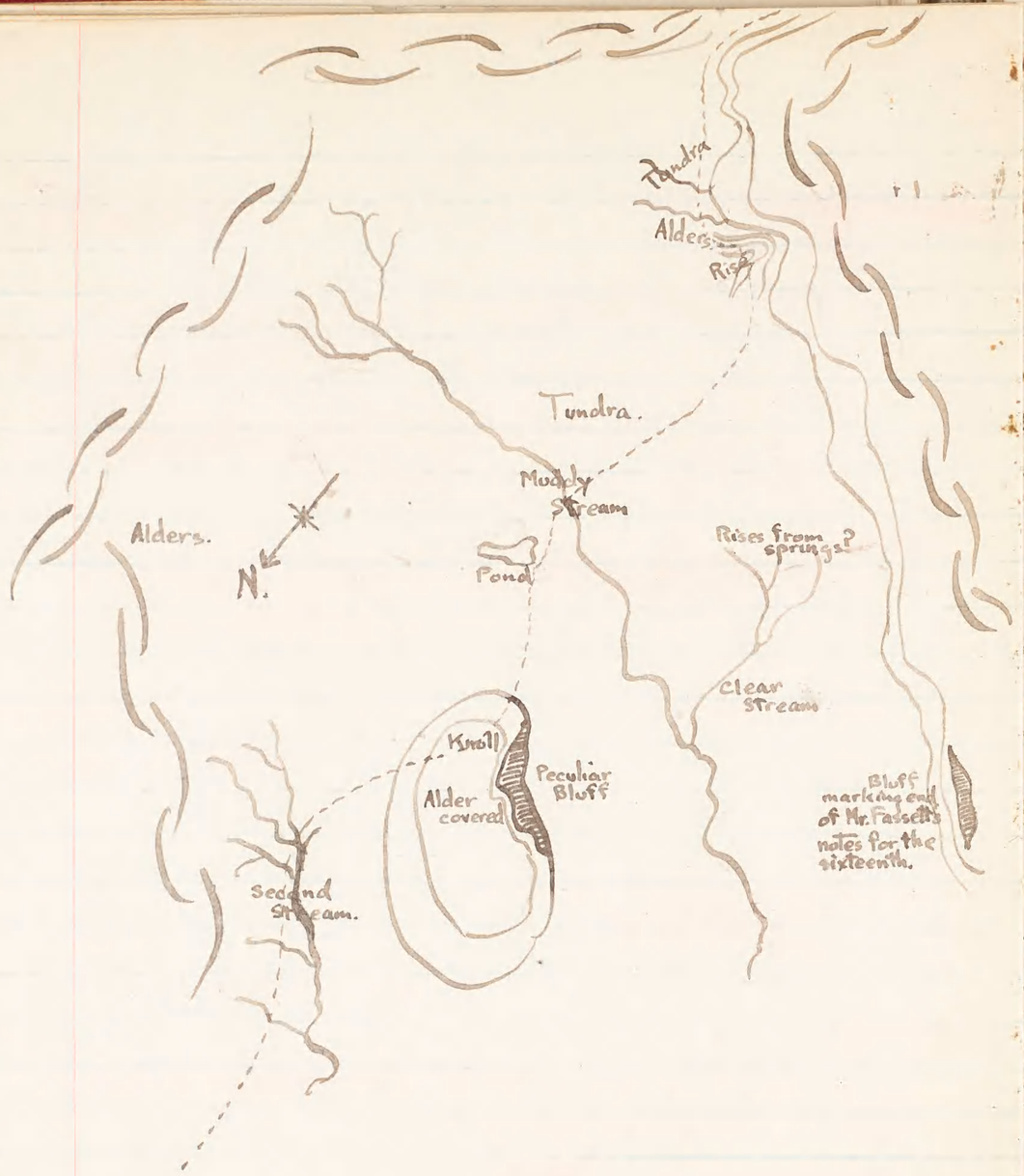
June 16 Morning very windy and rough. (Hunter) Took in gill net but drew a blank, doubtless due to improper placing. In afternoon went out under leadership of Mr. Grant, together with Johnstone and explored several small streams and quite a large swift river near W. Base. was between forty and fifty feet wide for a short distance in mouth

June 17. With Johnstone, explored river looked at yesterday afternoon, going to its source

Took a few readings in stream looked at on previous afternoon.

First stream Air. 9.25 Ther. 40.0 Bar. 30.61 Clear. Sur. 9.30

"Sink hole" Air. 9.36 Ther. 39.0 Bar. 30.56 Clear. Sur. 9.40



June 17 con. Small feeder to second stream from north. Cir. 9.48; Ther. 40.0; Bar. 3057; Clear. 10in wide, 2 deep. Sr. 9.51.

Another small feeder, north side. Cir. 9.53; Ther 40.0; Bar. 3055; Clear, 10 in wide, 2 deep. Sr. 9.56.

Second stream Cir. 9.57 Ther. 40.0 Bar. — Sr. 10.0.

Cir. 10.16 On south east slope of hill with peculiar bluff (noted by Mr. Fassett on June 16). It is the first knoll in the valley. Second stream on north slope of knoll, rises at base of mountain without snow, perpendicular cliff near to, by confluence of about half a dozen small feeders. "Muddy stream" on south side of knoll, rises on southwest slope of mountain range, flows southwest around base of knoll. Bar. 3044 Air Temp. 47.0; Sr. 10.30.

Small pond to southeast of knoll. 50ft by 100. Small slug collected here.

Cir. 10.43, Ther. 46.0; Bar. 3053 Sr. 10.46.

"Muddy stream" (Mr. Fassett noted 16th) Cir. 10.50; Ther. 39.0 Bar. 3052. Only slightly muddy today.

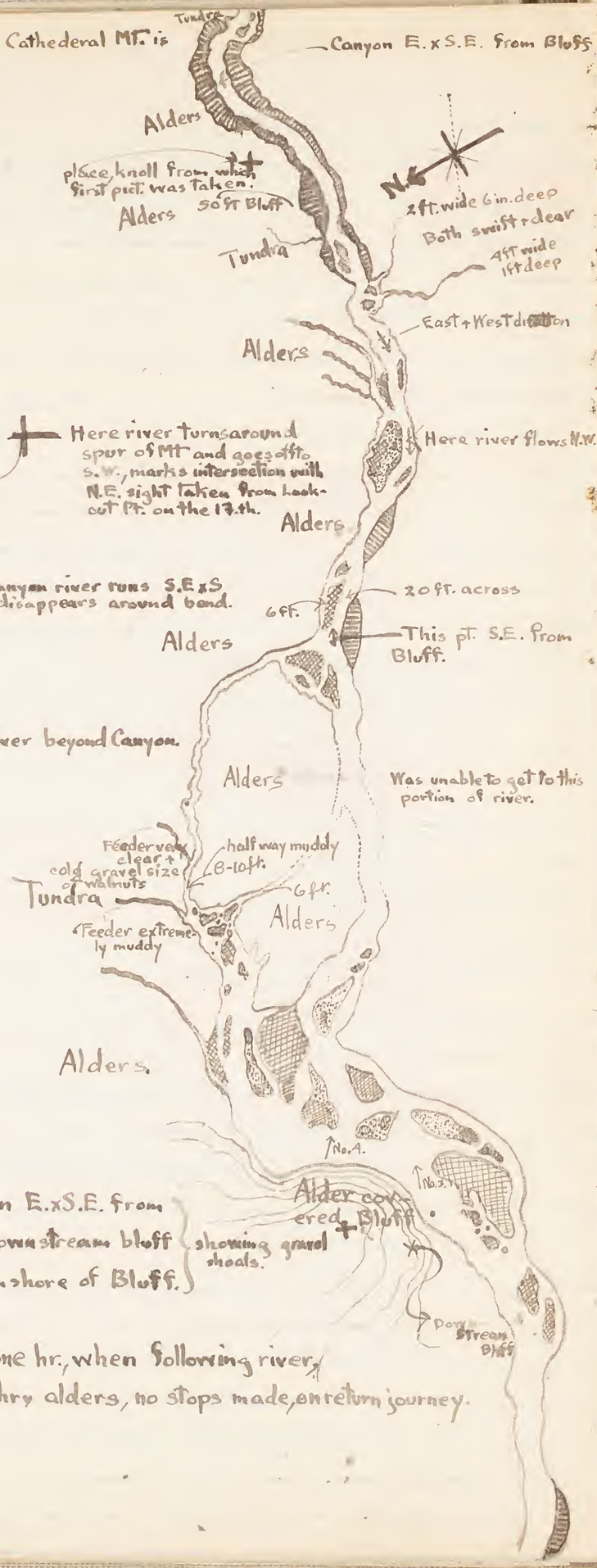
Cir. 11.00 at rise, bluff, which appears to be half way between "knoll" and hill on left hand side when looking downstream is off. We sang, but somewhat up stream from it. River shoals here making [illegible] tendency round bluff Sr. 11.04.

Feeder. Cir. 11.25; 1ft wide 2 deep. Clear, Ther. 39.0 Bar. 3053. Sr. 11.39.

{All streams clear unless otherwise noted and all on left hand bank, going upstream, as river was considerably passable because of depth and swiftness of current. Although 5 miles an hour.

From Canyon, Cathederal Mt. is due South.

Map, sketched June 18
with notes made at that time



2nd. Roll.
No. 3 Film taken E.xS.E. from shore of downstream bluff
No. 4. S.E. from shore of Bluff.

Time bet. Two crosses one hr., when following river, slow steady walking, mostly thru alders, no stops made, on return journey.

June 17. Another feeder just N. above preceding intermd. 6 feet wide 1 deep. Ther. 38.0. In Tundra

River just above bluff branches out around large id.

Feeder. Cir. 1.45; 2½ ft wide by 8 in deep. Bar. 3049 Ther. 43.00. Joins river after both branches unite above large id, in alders. Snr. 11.48.

River branches again forming another id Cir 11.51 Ther. 44. Another feeder at head of this id. Ther. 42. Snr. 11.57.

Feeder. Cir. 12.17. Ther. 42, Bar. 3045 Snr. 12.21.

Cir. 12.28 Picture from top of point knoll on left of river, as it (flows) enters mountains when one looks up the valley from lake. View taken toward lake, camera pointed about due west. Bar. 3026 Cir. tech. 54. Snr. 1.07 (No. 1 Film Roll I by Johnston)

After leaving knoll came to grass covered hill sides along river to small feeder 1 ft wide Cir. Tech. The Ther. 42. Bar. 3032 Snr. 1.18 Snr. 1.24.

Here river goes thru rocky canyon about 25 feet wide at this pt.

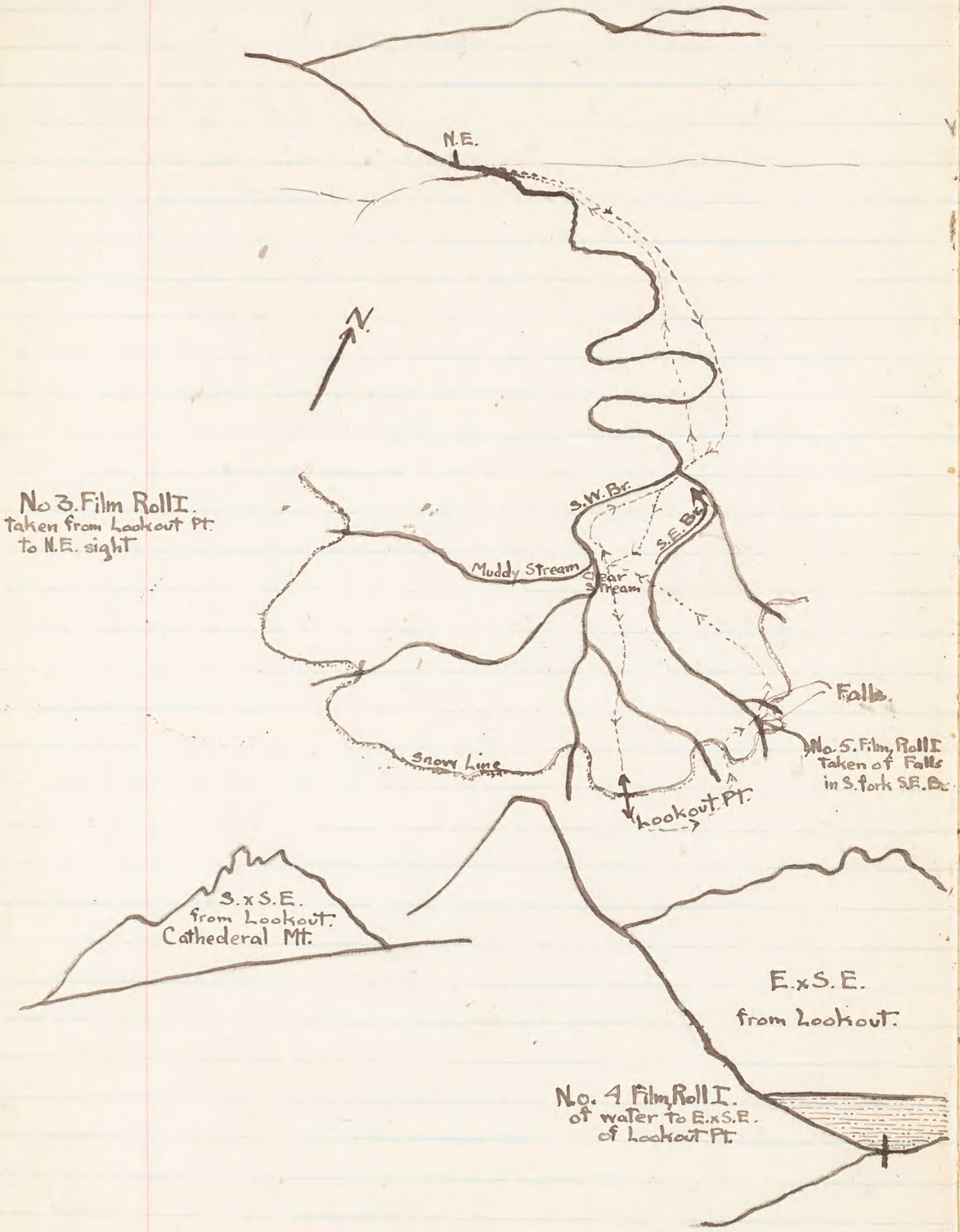
Feeder. Cir. 1.30 8 ft wide by 2 ft deep, rocky swift clear, Tundra land, this feeder joins just above canyon. Bar. 3036 Ther. 40. Joined just above its mouth by another 3 ft by 1 deep. Ther. 43. Snr. 1.38.

Cir. 1.57 Swift feeder slightly cloudy 2½ ft deep by 10 wide, about ⅓ size of river Bar. 3034 Ther 42.

Feeder. Cir. 2.05, 3 ft wide by 6 in deep sluggish clear Bar. 3032 Ther. 48 Snr. 2.11.

Feeder. Cir. 2.30 15 ft. wide 2½ deep. Very swift like river, clear. A few more of these and we will come to the end. Ther. 38. Bar. 3025.

Cir. 2.50 River here divides into 2 main branches, one to the S.E. the other to the S.W.



No 3. Film Roll I.
taken from Lookout Pt.
to N.E. sight

No. 5. Film, Roll I
Taken of Falls
in S. fork S.E. Br.

No. 4 Film, Roll I.
of water to E.xS.E.
of Lookout Pt.

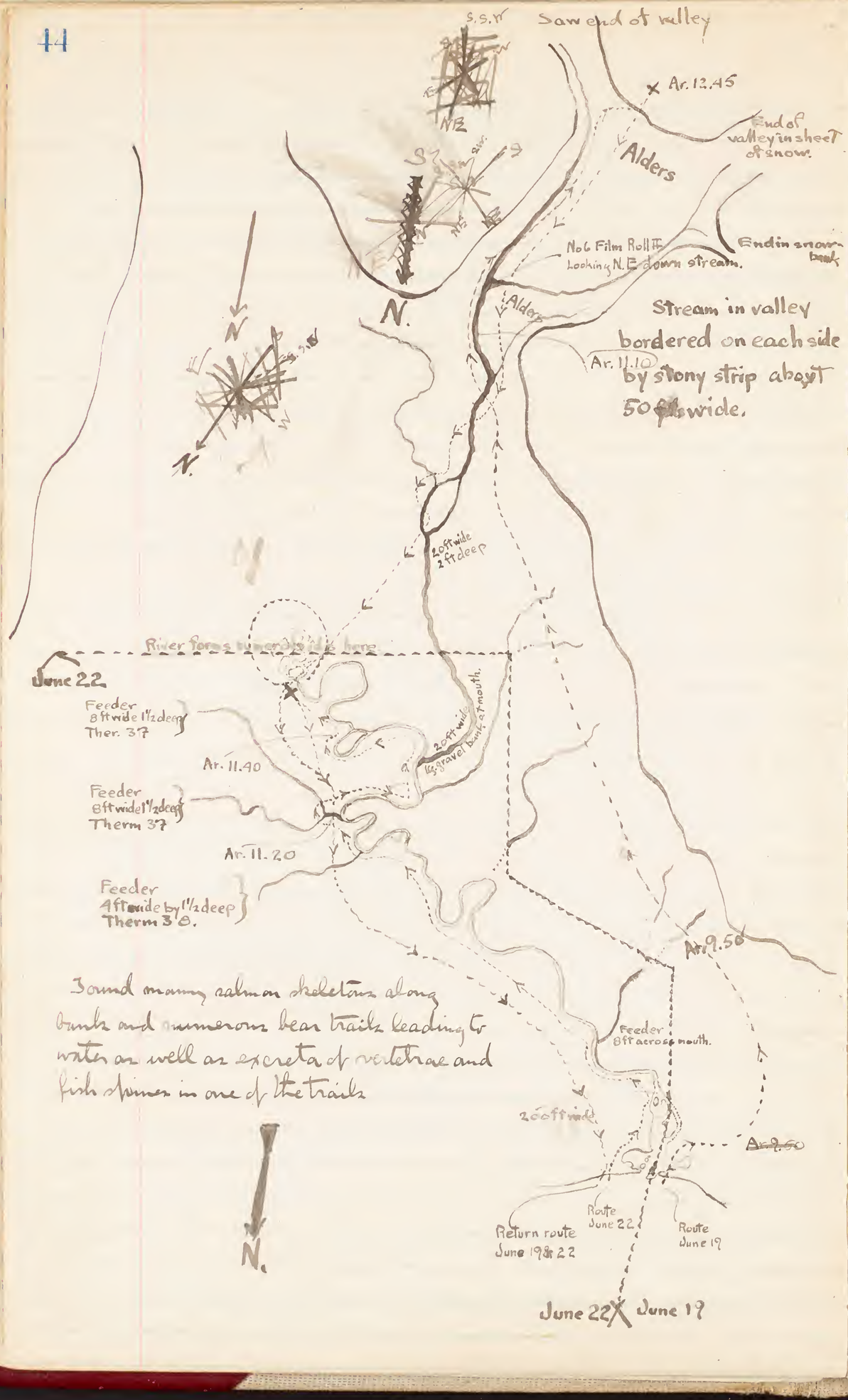
June 17. S.E. Branch 15 ft wide by 8 in deep. Swift, clear
Bar. 3013. Ther. 38.0 Sr. 2.54.
S.W. Branch 1/4 again as large as S.E.
Again bifurcates, Cr. 3.00, forms two
rushing torrents one clear from the south, the
other, muddy, from the west. (Picture taken of this by Schultz
hor. 2 35 film Roll II.
(hor. 6 Roll I
not finished
(supposed
S.E. Branch?)
Clear. S. fork, 10 ft wide by 2 deep. Ther. 36
Bar. 3011. muddy west fork inaccessible by small
than S. fork. Sr. 3.12.
Feeder to S fork just above mouth, Clear
very swift. Ther. 36. Bar. 3011. Sr. 3.22.
Cr. 4.30 Lookout Pt. Cr. Temp. 43. Bar. 2800.
Union of muddy and clear streams taken at
6.18 p.m. Ther. 35.
Back at Canyon at 7.20
Place of first picture at 7.40
Bluff by river at 8.20
Camp at 9.10
Bar. 3056

Note. Feeders on right hand side going up not visited as river was too deep and swift to cross with safety, and when they were with the exception of two small and steep, as that was the steep bank of the river, the side on which it hugged the mountain side.

June 18. Morning. 8.30 a.m. Stream Temp. 41.
Light N.W. breeze Lake Temp 44
Sky clear, only fair Bar. 3052.
Traces of clouds about mountain tops.

Went over to second, large river in south end of lake
Took two pictures on second roll.
Film No. 1. Roll II. mouth of river looking N, toward Lake
Film No. 2 Roll II. Upstream, S.xS.E. Ther. 52; Bar. 3048.
Ther. C. 11; Sp. Gr. 1,000.

June 18. Cf Temperature and notes at page 40.


S.S.W.
Saw end of valley
× Ar. 12.45
NE
End of valley in sheet of snow.
Alders
No 6 Film Roll II
Looking N.E. down stream.
End in snow bank
N.
Alders
Stream in valley bordered on each side by stony strip about 50 yds wide.
Ar. 11.10
N.
20ft wide 2ft deep
River forks here
June 22
Feeder 8ft wide 1½ deep Ther. 37
Ar. 11.40
Feeder 8ft wide 1½ deep Therm 37
Ar. 11.20
Feeder 4ft wide by 1½ deep Therm 38.
20ft wide ½ gravel bank at mouth.
Ar. 9.50
Feeder 8ft across mouth.
20ft wide
Ar. 9.50
Route June 22
Return route June 19 & 22
Route June 19
June 22
June 19
Found many salmon skeletons along banks and numerous bear trails leading to water as well as excreta of vertebrae and fish spines in one of the trails
N.

June 19. 8.00 a.m. Lake calm, light cirrus clouds disappearing rapidly, Stream Temp. 41; Bar. 3044; Lake temp. 47.

Sanded on far side of Lagoon, and had to keep to hillside on West side as going near river was too swampy to get over, going along parallel with river crossed several feeders flowing approximately East. Cn. 9.50

Feeder 3ft wide 1½ deep, moderately swift clear. Bar. 3044. Ther. C. 5. Sp. Gr. 1000.

Cn. 10.40. Feeder 8ft wide, 1 deep. Bar. 3033 Ther. 38. Ther. C. 3. Sp. Gr. 1000.

Cn. 9.53. Feeder. 1ft. wide, 6in deep. Bar. 3032 Ther. 38. Ther. C. 3. Sp. Gr. 1000.

Cn. 10.15 Feeder. gravel bed swift clear, 4ft wide, 1½ deep. Bar. 3040 Ther. 42. Ther. C. 5 Sp. Gr. 1000

Cn. 1035 Feeder. 4½ ft wide 1½ deep. clear swift. Bar. 3038. Ther. 41; Ther. C. 5; Sp. Gr. 1000.

Cn. 11.10 at head of river to S.W. hr. 5 Film Roll II. taken upstream S.S.W. 10 ft wide 1 deep. Bar. 3035 Ther. 45. This end was just off base of South Mt.

Cn. 12.45 at head of valley Air Temp 75. Ther. 40 Bar. 2993. Stream runs in a stony strip of about 100 yds wide.

Air Temp out in middle of valley, on stony strip 88.

Feeder. on north side of stream valley near mouth of valley. Ther. 42. Bar. 3023.

Took 1¾ hrs. to come length of valley. Branch from valley E of Shr. 8 ft wide 2 deep. Ther. 42. Bar. 3025.

June 20 8.30 a.m. Sky clear, Lake but slightly rough. Bar. 3041; Stream Tenth 43. Lake Tenth 44. Went out sounding with Mr. J'assett but suddenly the sea got up to such an extent as to render work impossible. Joined Hidden Lake and took a picture of it and Black Lake in the distance

June 21. Morning attempted to sound but water was too rough
Afternoon went out with Johnstone to look at river just above Devils Hose.
Cor. 3.05 Rocky bottom, very little small gravel present, shallow, 4 miles per hour; average 10 ft wide by 1½ deep. Ther. 38; Bar. 3002.
Some small gravelly shoals ~~but very swift~~ ~~4-5 miles an hour~~
Cor. 3.45 Feeder. 1 ft. by 3 in deep. Therm. 41 Bar. 2990
Cor. 4.00 Feeder 3 ft. by 6 in deep. Therm. 41 Bar. 2990

Map by Johnstone as seen from Mt. back of Camp Porterfield. June 21 – 11.

June 22 Afternoon's work see page 44.
June 23 Broke camp.
June 24 Afternoon aboard Albatross

June 25 Worked on setup of three stations for Hassett.

June. 26 at cannery 9.00 a.m.
At low tide took lagoon temp & sali. reading
Water temp 6.8°C. = 44.24 F.
{Sher. 7.9
{Sp.Gr. 1005.6
morning, lightly overcast no rain.
Collected in three shallow tide pools with dip net, in each got amphipods, isopods & shells. and in addition in the last, the largest, secured a large mussel, 2 large isopods and eight stickle backs. one a ripe one.
First pool. 10 ft dia depth 1.2 in Sher. 46
2nd " 15 " " " 6 " Sher. 44
3d. covered a whole small bay-like indentation several hundred sq ft across 1½ ft in deepest part Sher. 43.
At high tide 1.15 p.m. took another reading.
Sher. 6.8°C = 44.24 F.
{Sher. 15°C
{Sp.Gr. 1012.9
At noon misty rain in afternoon heaped at times higher misty again

June 27 Salinometer reading 7.15 Tide almost all out going
Water Temp 6.5C = 43.7°F Sher. F 44-
{Sher. 7.6
{Sp.Gr. 1010.8
Morning, sky overcast, drizzle, light east wind.
Collected off tide flats with dip net, at outer edge, secured, numerous gasteropods, several limpets and a mussel, one bottle of numerous copepods? which were extremely thick just off the delta of the first stream west of the cannery
Got one dish Sord with dynamite cap.
Got a tiny young salmon with bulging eyes about an inch long with dip net.

June 28 Salinometer reading 9.40.
Water Temp. 6.5°C = ; F = 44-
Sal. {Temp. 8.0
{Sp.Gr. 1010.
Sky overcast, few patches of blue sky, wind not noticeable

Salinometer cup reading of water sample taken in mid-channel off island traps, high water, 3.30 p.m. June 28, Water temp 44, Air temp 45.5.
Sal. {Temp. 8.5
{Sp.Gr. 1007.2

[redacted] Piped envelopes for salmon scales, entrained around engine.

June 29 morning slightly misty, later somewhat clearer light east wind. at extreme low tide
Water temp. 6.8°C = 44.24 F = 44°-
Air Temp.
Sal {Temp. 11.1
{Sp.Gr. 1012.2

morning collected on tidal flats off delta of first west of cannery creek, secured small transparent fish fry, and with dip. caps secured several fingerlings. Amphipods were in company with the Canvas. Several gasteropods were secured as well as
Toad sucker was brought in from trap on June 29-11 by one of the men

Afternoon went up stream just west of cannery

Ar. at X at 2.20. Stream a rushing torrent, 4 ft. wide rises about 10 ft in 100 yds (endirect S.S.E. Ther. 38 Bar 2972 Feeder drops down a canyon wall (by a series of jumps) between 175 ft high.

Feeder from N.E. Steep, from ca... 6 in wide by 2 deep.

Almost i... hillsides,

Sn... mar...

Dam

Stream, rocky very little small gravel runs about 2½ mi. per hr. 8ft wide 8 in deep Ther. 40.5 Bar. 2971

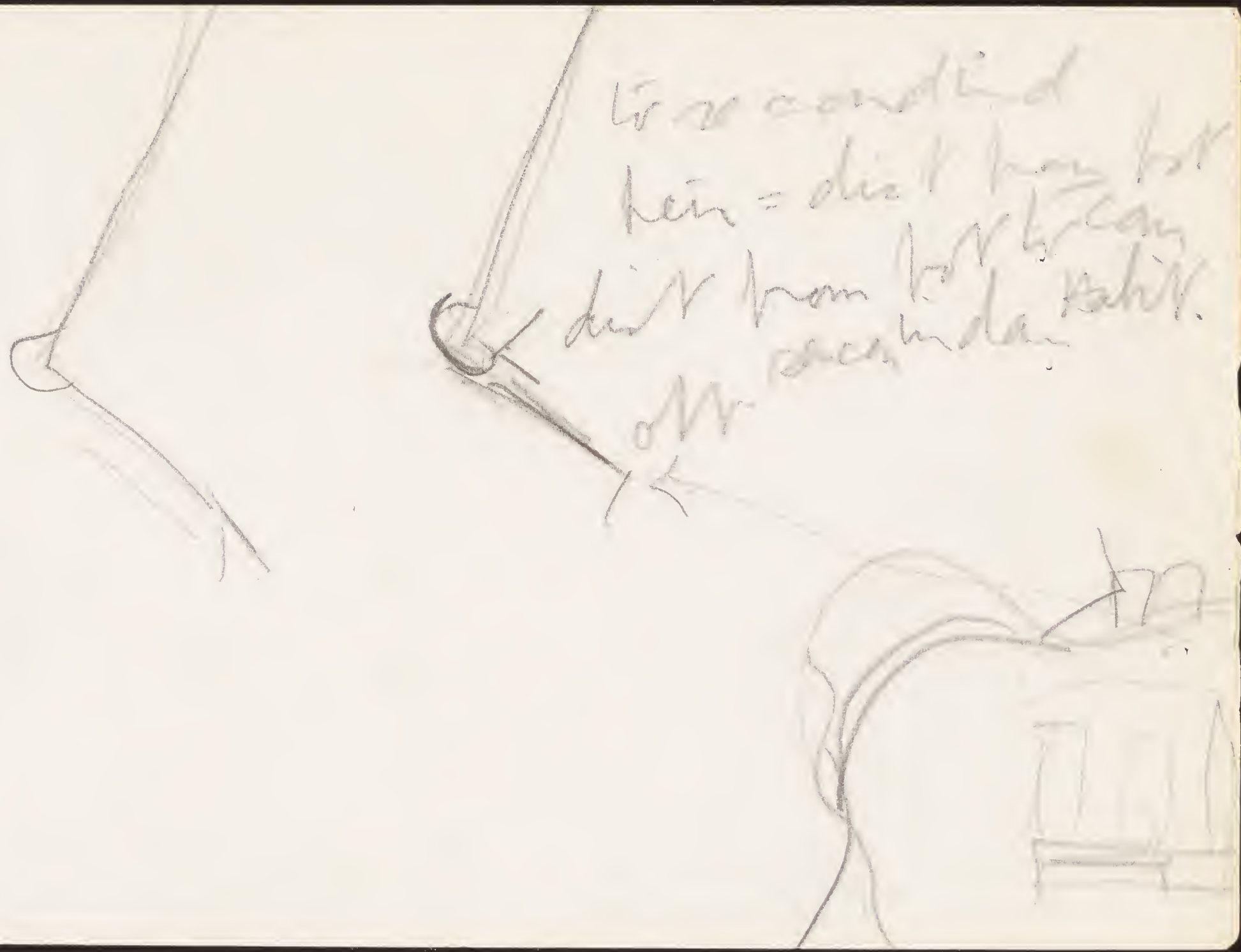
Lv. 1.15 Bar 2995

Lookout Pt. Ar. 3.30 Bar. 2850. Air. temp 48.5
High peak in valley back of Cannery on east side to E.N.E.
Cannery to N.
Middle patch of water of Lake to S.W. of Hill

Graph diagram

...sland

Graph diagram


transcribed
here = distance between
distance between
of N
C
N

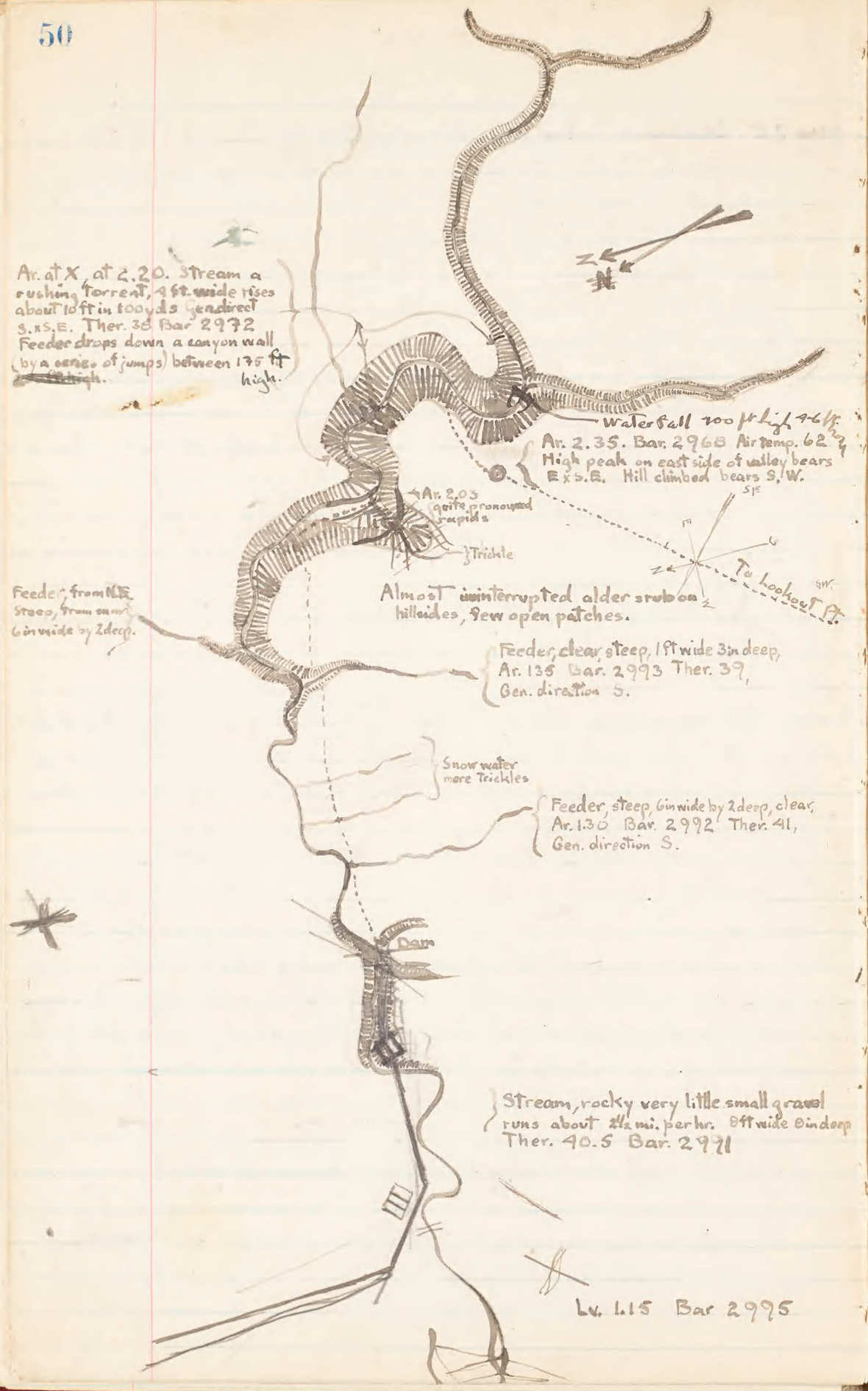
air temp 48 1/2

Wendelstein

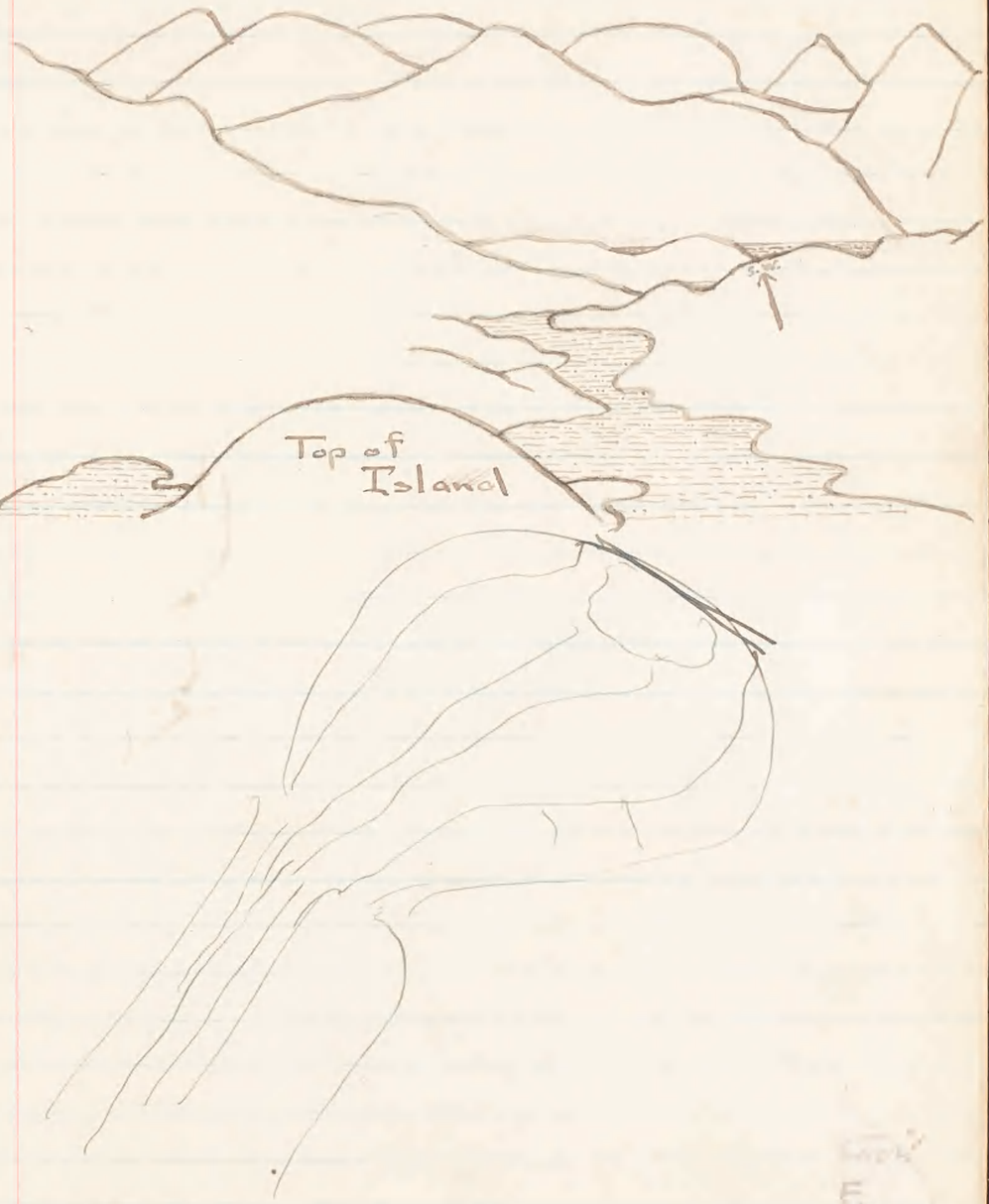
Lauschy

S 1/2

N
NE
E
SW
S

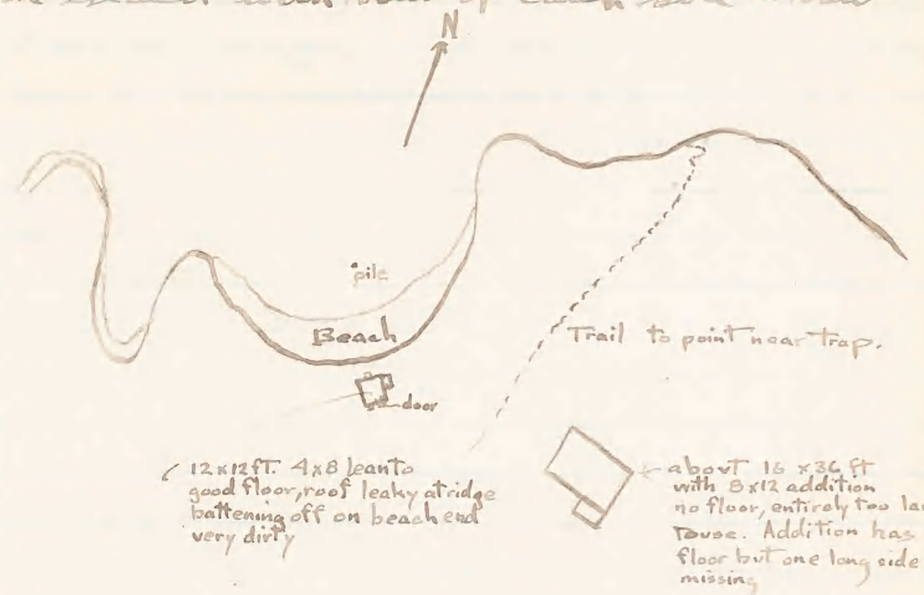

Ar. at X, at 2.20. Stream a rushing torrent, 4 ft. wide rises about 10 ft in 100 yds Gen. direct S. x S.E. Ther. 38 Bar 2972 Feeder drops down a canyon wall (by a series of jumps) between 175 ft high.
Waterfall 100 ft high 46 ft. long
Ar. 2.35. Bar. 2968 Air temp. 62 High peak on east side of valley bears E x S.E. Hill climbed bears S.W.
Ar. 2.05 (quite pronounced rapids
Trickle
To Lookout Pt.
Almost uninterrupted alder scrub on hillsides, few open patches.
Feeder from N.E. Steep, 9 ins wide by 2 deep.
Feeder, clear, steep, 1 ft wide 3 in deep, Ar. 135 Bar. 2993 Ther. 39, Gen. direction S.
Snow water more Trickles
Feeder, steep, 6 in wide by 2 deep, clear, Ar. 1.30 Bar. 2992 Ther. 41, Gen. direction S.
Dam
Stream, rocky very little small gravel runs about ½ mi. per hr. 8 ft wide 0 in deep Ther. 40.5 Bar. 2991
Lv. 1.15 Bar 2995

Lookout Pt. Ar. 3.30 Bar. 2850. Air. temp 48.5
High peak in valley back of Cannery on east side to E.x.S.E.
Cannery to N.
Middle patch of water of. Lake to S.W. of Hill



June 30 Rain 9.30
Sal. { Sp. Gr. 1013.8 / Temp 14° } Water temp 7.5°C = 45.F

Collected on flats, worked Cannery and reefs a number shells a herring and crab. Ilwaco afternoon. looked at building on island with Celeden of camp site in view


N
pile
Beach
door
Trail to point near trap.
12x12 ft. 4x8 leanto good floor, roof leaky at ridge battening off on beach end very dirty
about 16 x 36 ft with 8x12 addition no floor, entirely too large house. Addition has floor but one long side is missing

July 1. Clear, light east wind few clouds.
Water temp at Rocky Pt. 46° { Sp. Gr. 1012.4 / Temp. 13 }
" sample from " " Sal.

Collected numerous gastropods, 6 red pods, quite a number of amphipods, several small skin pods. 3 herring; 1 small flounder; 3 Stickle backs and 2 salmon, just off the point Water temp 46°F Scraped from freshwater pods just back of P't, 7 stickle backs, 2 species and several pod pods bivalves. Water temp 51°F
In stream just West of Cannery took 2 trout with Hyp. copa Water temp. 41°F.

July 2. Clear, light east wind

From cook secured an adult, red salmon, the viscera of which had become grown onto the body cavity walls. Specimen saved. Gut intestinal worms from pyloric caeca of and the scales saved in first instance ~~etc~~.

Engineer of the Chignik secured a water sample during low tide near 12 midnight

Sal. { Sp. Gr. 1008.8
Temp. 15.2°C

July 3. Brisk east wind, rain, cloudy

Water temp at 2.10 p.m = 8.2°C =

Sal. { Sp. Gr. 1008.7
Temp. 9.0°C

Stream density of first stream west of A.P.A Cannery.

Sal { Sp. Gr. 1000
Temp. 6.5°C.

Secured seven small trout with dyn caps.

July 4 Cl. 1.45 Water temp. 8.5°C

Sal. { Sp. Gr. 1008.1
Temp. 9.0.

In evening Lords launch out on trial spin

Took sample of water off A.P.A. Upper Camp.

Sal Sp. Gr. 1006
Temp. 10.

Cloudy, calm day, slight easterly breezes at times

July 5. In three spec of King salmon taken ~~July 4th~~ in Chignik Lagoon traps young sand ~~lay~~ candle fish were found. Stomach, contents, dorsal and anal fins as well as hearts of ~~oranges~~ found in two of the spec. were saved as well as a ~~separate~~ of few of the better appearing candle fish for specific determination. About a dozen red salmon were examined at the same time but the stomachs were found to be empty.

Water sample from mid channel. 3.00 p.m.

Sal. { Sp. Gr. 1008.0
Temp. 10°C

Collected a few shells + Crustaceans along shore of Lagoon

July 6 Went to lake with Shed for part of apparatus left there. Took ~~3~~ 5 hrs up and 2 down.

Sal reading in outlet near 12. noon

Sp. Gr. 1000.
Temp. 9°

Sal. reading stream 12 noon

Sp. Gr. 1000.
Temp. 9°

Sal reading lake at 6 30 p.m

Sp. Gr. ~~1000.2~~ 1000.2
Temp 10.3°

Morning bright and clear with light ~~west~~ northwest breeze which later shifted to the east bring clouds and later rain, lake was calm while there 12 – 6.30. Camp ~~in~~ untouched by animals or otherwise four fish secured from stream by Camp. with dyn. cap. no evidence that salmon had yet reached the lake none were seen jumping.

July 7 Clean up day in lab. changed alcohol
AT. 9 00 pm. / sal. reading.
~~water~~ temp in 8.5°C = °F
Sal. { Sp.Gr. 1016.7
Temp. 8.8°C
Cloudy day, no wind slight misting at times
Tide ~~almost at~~ in coming.

July 8 Day clouded over, N.W. Wind, ~~but~~ quite calm, Tide ~~was~~ 6.30 am.
Water Temp 42. Air temp. 48.5
Sal. { Sp.Gr. 1006.5
Temp. 8.9

AT. 12 noon
Sal. { Sp. Gr. 1014.3
Temp. 10°

July 9 Sunday Day partially clear, westerly wind, Tide low
Sal { Sp. Gr. 1009.0
Temp 12.8
Soaked for Waterville gall fishing
Launch flooded thru ~~leaking~~ cracking out of plug

July 10 Tinkered up launch, to get in shape for lake trip.
Cloudy day easterly wind, moderate in during day. In evening very calm
Water sampled at 9 00 p.m.
Sal. { Sp. Gr 1013.2
Temp. 10°

July 11 Got ready and at shortly after 1.00 p.m. left Cannery for Upper Lake. Stopped at Bill Johnsteens for the night. After giving air and water temp. to hrs. I was ~~ill~~

July 12 Started up the upper river toward the Upper Lake.

10.30 am. Stopped at deserted native camp left bank of east channel.
Air Temp 51.5 Water Temp. 50.
Made birds eye view sketch of river.

1.00 p.m. Stopped for lunch.
Air Temp 52 Water Temp 51.
Made couple of sketches.

4.00 p.m. Air 52 Water 56

5.30 p.m. Air 50 Water 50

7.00 p.m. Air 48.5. Water 53.

July 13. 10.30 am. at House Boat
Air Temp 62. Water Temp stream 48
lake 54
11.45 am. air Temp 66. water Temp. 57
Sal. Temp 14.5 Sp. Gr. 1000

1.00 p.m. E. End of base line
Air 66° Sal { 1000
Water 60° { 11°

3.15 West end base line.
Air 57.5 Sal { 14°
Water 57 { 1000

† Barabara Sta. July 12 - 1911. 10.30 a.m.

July 13. 4.20 p.m. Water 58 Air 59 Sal { 1000

5.30 p.m. at hearer Deer Pt. Air 56.5 Water 56

6.15 p.m. Crooked Creek. Water 52
Sal. 1000
Few small fish from Crooked Creek; a few more from adjacent streams.

6.30 p.m. Far Deer Pt. Air 54

7.00 pm. Deer Base Pt. Air 54.

July 14. Air temp 54.5 Clear bright morning few clouds
Water Stream 44.5 Water Lake. 55
Sal. stream { 7.5 / 1000 Sal. Lake. { 13. / 1000.

10.30 a.m. Water 60 Sal. { 1000
Air 61 { 14.8.
Few small fish at about the mouth of creek
1.00 p.m. Head of Lake. Water 66; Air 59.

2.00 p.m. Portage Creek.
Air 59 Sal. { 17°
Water 62. { 1000
Shells along beach near Base Line 2 miles
9.30 p.m. ~~Willow~~ ~~Ice~~ Creek. Cotton wood
Water 48 Air 46.
Had a frost during the night.

July 15. ~~Willow Ice~~ Cotton Wood Creek.
Air 52 Sal { 1002
Water 46 { 68°

7.30 a.m.
~~Big Jo~~ High Willow R. Air 57 Sal. { 1000
Water 51 { 14°

July 15 Big Flat Creek. 7.45 a.m.
Air 57 Sal. { 1000
Water 47 9.

8.00 am. Water 56 Air 57

8.30 air 54.
J'am fish near East Spit

9.30 Caribou Creek
Air 63 Sal { 1001
Water 46 9°

July 16. 7.00 am. ~~a.m.~~ Water 43 Air 52
Sal. 1001 Temp 8.7
Chalarope eating mosquitos came up the Creek to near where I was taking readings

7.30 Mr. River
Water 52 Sal. { 1000
Air 50.5 11.5

9.00 p.m. Water 46

July 17. 7.00 a.m. Air 51 Water 45.5

9.00 p.m. Air 57. Water 47.

July 18 6.30 a.m. Water 46
Air 59.
Collected two small fish just outside of beginning of Chignik River
A hematode worm

July. 19 Day off.

July 20. 1.15 p.m. Water temp. 51 Sal { 1007
Air " 54 15°
Clear bright, foggy in distance, N.E. Wind.

5.15 p.m. At Port of C. R. Trap. No. 5.
Temp. water 54 Sal. { 1010.2
11.8°

~~July 21~~
~~July 20~~ July 21

9.30 a.m. Sky overcast few blue patches showing thru, easterly wind, hills across lagoon ~~obscured by clouds~~ fog.
Water temp 53 { 1014.2
Air " 58 12°

July 21 8.12 – 8.17 p.m. Saw net haul fine mesh (
Upstream from location of large floating trash

8.30 – 8.35 p.m. Same net haul off C.R.P.A. Camp

8.42 – 8.47 p.m. Shrimp opening in Sand Spit.

scrubbed haunch

No. 4 haul was attempted but net developed 4 inch slit and work had to be discontinued

Water sample taken at completion of final haul. Sal { 1020
11.8°

July 22, 7.00 a.m.
Clear bright sun shiny few clouds in dis.
Brisk westerly breeze. Sal { 1010.
Water temp 52 Air [illegible] { 13.2

July 23. Sea weed collected
Air 51. Water 53 7 a.m.
Sal. 1007.7
17°

With pp. 59 & 60

July 24. Water temp. 53 Sal. { 1012.0 (5 p.m.) made signals
Cloudy clear day with drizzle { 10.2 in morning

July 25. 10.00 a.m.
made start for launch mowing. Steps clear.
Strong S.W. wind Cold clear sunny
Air temp. 56 Sal. { 1010.6 10. a.m.
Water. 53 { 13
2.15. Air. Sal. { 1019.7
Water 50.5 { 13.0
Windy all day, large white caps.

July 26 9 am. Air 51 Water 47 Sal. { 1012.
Westerly wind { 13°
Surveying in afternoon, laid off base line

July 27 Sal. { 1013 Windy, from west clear becoming cloudy
{ 12
Collected sea weed went surveying with Bassett

July 28 Fixed up sea weed, + birds ~~rift~~ secured 1 Hauls
+ 1 stitch. Carried 10, 25 pr Hauls into
cannery.

July 29. Went down on Owl to Kaigas Floating traps to
see reported red ~~pa~~ patches were kind of diffuse
chocolate brown color, made 4 towed
hauls of about a minute ~~duration~~ duration.
Sal. 1022.3
12.

July 30 Sunday wrote letter to Bill.
" 31 Went down in Owl but saw no red patches. Sawed wood part of morning and all afternoon.

Aug 1st Sawed wood
Seined small flounders

Aug 2nd Deformed salmon gotten from fish house
wrote letter

Aug 3d. Painted shirts after climbing hills back of camp
saw a waterfall 100 ft high

Aug. 4. Took Mr. J'assets. to C.B.P.C. Camp. in afternoon after building signals and ~~stuff~~ attaching step for flag

Aug 5. Surveyed all day put up base line Signals and several others

Aug 6. Sunday
Painted Sig. in afternoon; took Mr. J'assets to Sand Spit after ~~of~~ putting new parts in the igniter, from Sand Spit ~~we~~ went to Col. River Camp where I got water sample at 10.45
Water Temp. 52. Sal. { 1015.7 / 15°
~~for a sea~~ ~~from Flagg~~ ~~taken~~ ~~at~~ ~~record~~ ~~acclimatization~~

Aug 7 Ripped Boards in morning ~~took~~ load on Launch in afternoon; Rood & Taylor.

Aug. 20 egg cases from Flagg fish anchor

Aug 22 Rain + Wind since Sunday so that ~~that~~ no work could be done

Have sawed all told 10,25 (12×1) ft planks into 3 inch strips, 4 strips to a plank.
rip ~~saw~~ sawed 4 of these into half again
rip ~~saw~~ 2,25 (12×1) planks into 5 strips each
ate ate

The last several weeks have been occupied and late with Mr. Forsett.

Collected odds and ends of ~~fish~~ fish while ~~sacrificing~~ stations

Until last Thursday
Sunday was Flagg's birthday and the crew made him a fine cake ~~with~~ iced and figured ~~with~~ candles

End of Alaska.

Postponed until further notice
Cancelled

~~Panama Cruise~~ 1912.

Biol. Surv. of S.F. Bay

Jan. 30 Made one sounding and water bottle failed to work, with Sumner Blish machine
Temp.
Depth

D. 5700 Dredge Haul with 9ft. Agassiz reversible net with regulation runners
Sandy bottom, net torn,
Shells, Hydrozoa
Flounders, Bryozoa
much sand and gravel, discarded

D. 5701 Net carried away just below frame

D. 5702 Made in fms.
9ft. Agassiz small net, short, with funnel, reduced
Shells galore
Worms
Bryozoa
Hydrozoa
Tunicates
Medusae
Actinians

Jan 31 Johnston + I broke out and rigged Sumner net in place of Agassiz. Mixed up solution and filled dilute alcohol tanks. Changed solution and withal was too busy to use submarine or make vertical haul.

Feb. 1st

Feb. 2nd Four fingers for work went over to U. of C with Th. Sumner. Called on Banks that evening

Feb. 3d. Johnston and I packed bottles and alcohol in forenoon and went over to U of C to see Th. Sumner in afternoon

Feb. 4 Worked from eight till 2 p.m. Sunday on nets

" 5 Worked all day on nets got 9ft Agassiz and 5 ft. Sumner rigged

Feb. 6 made a bunch of tanks used both nets

Feb. 7 at Berkeley moved cases and changed solutions ~~at~~ Co ship at night

" 8. Berkeley, worked on shrimps ~~Berk~~ Co ship at night

" 9 ~~Berk~~ On Fraser with Th. Sumner Berkeley at night ~~Blanch~~ stayed over

" 10 Cr Univ. with shrimps and crabs named Cancer { Portunus / magister / gracilis } stayed over Anna

" 11. ~~Sund~~ a sun Fished all ~~day~~ following.

" 12 Fiddled around all day trying to get an intermediate net rigged

" 13 ~~Work~~ Water sample tanks all day bottled & kept notes

" 14 Berkeley water samples

" 15 Water Matter work / Mare Id + return.

Feb. 16 Predge work near Golden Gate
Feb. 17 Worked on four foot tow net after shopping in the morning
Feb 18 morning put in a half day at the University on shrimps, afternoon at Bases.
Feb. 19 Worked lake bell on 4 foot tow net liming and rushed over to city late in afternoon to have grommets put in.

Sunday 21 July Went out in the Olanda, Paladini's fishing boat 85 ft. long with speed of nine knots; left at 4.15 am. foggy with but small ground swell running. Steamed straight out of the Gate past light ship and continued on for about an hour more, roughly ten miles past the light ship. Net was gotten over board, had seven hundred fathom of line on each end, two wide meshed wings with bag about 6 times as long, corks and lead line to and around mouth of bag was hauled by two tugs at a speed of 2½ knots for a period of about 2½ hours, hauled in by each tug over pulley on steam winch on each boat until near surface then both lines are passed over to one boat and hauled in until wings appear then third line from one of the leads to tail of bag is also hoisted in as wings are pulled up on deck until the mouth of the bag appears and then further until weight is taken from line is passed around bag and over light boom hoisted until nets is clear on deck in

May 27 Dredged over oyster beds in lower end of Bay made first run with boat dredge from channel to line of stakes marking first oyster bed and continued at east way into bed went in as far as height of tide permitted then turned at right angles to course and continued haul to southward. Made a jump of a few miles to next oyster beds and with permission of care taker made one haul half way around small bed. Beam trawl not used owing to roughness of bottom.
Caretaker Lopez

with another line bag of fish is rolled over and lashing undone and fish sorted. In case too heavy a load of fish in second bag is provided with a lashing woven through two edges of the net from some distance above the bottom of the bag to it. In that case bag is hauled till part of catch is above water but the greater part is supported by the lashing just mentioned and when deemed advisable with hooks until large dip nets manipulated by three men have lightened the load sufficient to enable the boom to take up the load. Dip nets about the size of those used in fishing traps in Alaska
Crew = Captain, Engineer & assistant, boss fisherman who is captain relief, cook who helps with fishing between times and six men.
A meal is eaten after each haul all eat out of a common pan. First meal hash of vegetables and beef together with tomatoes and lettuce salad flavored with cloves. Each man had a demijohn of wine along to wash the meal down with. Every man is provided a knife of own bread

Fe Fel Fel Fe ! Su

~~June 24~~ ~~Sunday~~ and a fork ad all pitch in, not into the pan but speared up a bit of meat or vegetable and lay it on the bread and the rest it or tear of a bit of bread and with the fork swirl it around in the gravy. The second was like unto the first, but more meat and in slices, really roast ~~beef~~ garlic flavored the garlic being put into little pockets cut into the meat.

~~Sept 1 meal~~ was ~~like~~ unto the first ~~after but~~

The last meal was a big ~~frag~~ of spaghetti and tomatoes, in this ~~day~~ case each one had an individual ~~pan~~ pan which he filled from the main one, small cod fried fish ad bread washed down with wine completed the last meal.

Aug. 1 Shore collecting Johnston and Schmitt, North and south shores of Golden gate rest't. South shore exposed and sandy but little collected below action of sand on rocks, barnacles, ~~the smaller~~ seaweed, sea anemones, 3 sp. chitons and limpets + formed greater part of catch. 2 Hemigrapsus were taken in rock crevices as well as two starfish of which not over a dozen were seen, isopods amphipods and annelid worms were quite plentiful.

North shore quite weedy, amphipods + Hemigrapsus plentiful, Kelpcrabs Epialtus half dozen taken, few tiny hermits ~~but~~ limpets, chitons in limited number, numerous sea anemones were seen but few taken ~~representative of catch~~ barnacles likewise.

Aug 2. Collection were made from piles of Key route pier concrete sewer and adjacent tide flats, (mudd sand firm enough to walk on) Barnacles mytilus ~~with~~ hydroids comprised almost the whole of the scrapings from the piles, Hemigrapsus without number were taken from the flats adjacent to the piles and under rocks around the filled in portion of the Key route pier.

From the ~~bot of the~~ high water mark sewer, were obtained quantities of green sea weed (Ulva sp.) barnacles ad small gasteropods at the low water mark were obtained species as on the piles, a bucket of mud was obtained which on washing yielded an almost incredible number of red nematode worms. Worms were especially numerous in all parts of the barnacles both high and low tide zones as well as the mud flats. Isopods were also particularly numerous ~~as were~~ Gammarid amphipods were more or less few and far between.

Fe Aug 3 Trip was made to Red Rock. Collected in
Fe tide zone, Mr. Johnston worked flats north
of S.O Co's pier on Richmond shore while
Fe Mr. Schmitt et al covered the beaches about
Red Rock.
Mr. Johnston secured a Polychaete (mid-shipman), sea
Fe weed, shells, hermits and a Hemigrapsus, stenopus and of course isopods and
amphipods.
At Red Rock were secured 1 small scallop
(Cathum sp?), numerous Thais lamellosa,
and smaller black gastropods, hermits, Hemigrapsus

Dec. 6-12 Capt. Called my attention to seals in Bay, Lat. Angel Id and Shipwreck Rock and Blacks

Mar. 22-23 Herring eggs on everything, kelp, seaweed and rock. Gonsalidi

Mar. 30-13 Collected at Bolinas Bay;
det by B.L. Clark U of C

Echinodermata,
Echinarachnius excentricus Eschscholtz
Pisaster pancispinus
Amphineura
Mopalia wosnessenskii Gould
Pelecypoda " muscosa "
Adula falcata Gould
" styliina Carpenter
Cardita subquadrata "
Cardium corbis Martyn
Chama exogyra Conrad
Hiatella gigantea Gray
Macoma balthica Linn var inconspicua Bard + Sav
" inquinata Deshayes
" nasuta Conrad
" secta "
Macoma sp.
Monia macroschisma Deshayes
Modiola recta Conrad
Mytilus edulis Linn
Mya arenaria Linn
Pachydesma tenerrima Carpenter
" staminea Conrad
" " var. diversa Sowerby
" " " rugosa Deshayes
Paraphotas californicum Conrad
Petricola carditoides "
Pecten hastatus Sowerby
Pholadidea penita Conrad
Platydon concellatum "
Saxicava pholadis Linn
Saxidomus nuttalli Conrad
Schizothaerus nuttalli "
Siliqua lucida "

Mar. 30-13.

Siliqua patula var. nuttali Conrad
Solen sicarius Gould
Spisula catilliformis Conrad
Sellina bodegensis Hinds
Sellina buttoni Dall
Zirfaea crispata Linn
Gastropoda
Acmea spectrum Reeve
" mitra Eschltz
" pelta "
" patina "
Acanthina engonata Conrad
Amphissa corrugata Reeve
Bittium eschrichtii Middendorf
Gallirostona costatum Martyn
Erilidea californica Hald
Chrysodomus dirus Reeve
Columbella (Astyris) gausapata Gould
" (") " var carinata Hinds
Crepidula adunca Sowerby
" navea Gould
Hiala sp.
Epitonium indianum Hinds
Turbonilla aspera Eschltz
Haliotis rufescens Swains
Lacuna porrecta Carpenter
" var. exaequata "
Littorina scutulata Gould
Margarita acuticostata Carpenter
Megalatbenna bimaculatum Hall
Nassa cooperi Forbes
" perpinguis Gould
" mendica "
" perpinguis "
Ocinebra lurida Middendorf
" " var. munda
" interfossa Carpenter

Odostoma tenuis Carpenter
Olivella biplicata Sowerby
" intorta Carpenter
Polynices lewisii Gould
Purpura foliata Gould
Tegula (Chlorostoma) funebralis A. Adams
" " brunnea Phillippi
Thais lamellosa Gmelin
" saxicola Valenciennes
Turris incisa Carpenter
Vermes
Turris ophioderma Dall
Serpula sp.

Oct. 13-13 { Millrae Beds T. beach in 2x3 pos sawed pine
Monkeree { Elmhurst Beds T. " in Red gum piles
merge Oyster cove Oyster Beds Sunnyvale Bay

Apr. 12 Underway at 6 a.m. sent mail ashore at 5.30., Pt Bonita at 8.41 Pt Reyes 3.30
Apl 13. San Miguel, at night 3-4 fore shipped a common porpoise, fin, lower edge of fin was white Lagenorhynchus obliquidens Gill.
Apr. 14. Fresh S.E gale, with heavy sea running, 12-4-46 p.m. 12.26 hove to heading S.

This begins Dall's Survey

1914

Oregon fishing cruise. 1914

April 29

H.5366 ① 5.02 a.m.
68 fms.
hard bottom, rocky

67 ② 5.22 a.m.
79 fms.
fine grey sand, bottom not good

68 ③ 5.33 a.m.
84 fms.
fine black sand.

69 ④ 5.47 a.m.
110 fms.
fine black sand, inclined to get muddy

70 ⑤ × 6.04 a.m.
80 fms.
hard bottom, coarse gravel, one piece of rock broken off from bottom.

71 ⑥ × 6.15 a.m.
84 fms.
hard green mud, lighter grey brown mud color

72. ⑦ × 6.35 a.m.
90 fms.
hard bottom

like 5370

73. ⑧ × 6.50 a.m.
165 fms.
black sand & small piece of mud colored rock. (black sand & gravel)

1914

Apr. 29 (con.) ⑨ 7.10 a.m.
H.5374 100 fms. lead bumped as if all coarse bottom sample picked up, must have struck very smooth surface.

75 ⑩ 7.30 a.m.
84 fms.
broken rock and gravel & pebbles. (one pebble brought up 1¼ × ½" well rounded) no fine sand recovered. This will called bottom coarse gravel

76 ⑪ × 9.50 a.m.
80 fms.
hard mud as previous mud samples, lead from appearance apparently hit rock.

77 ⑫ × 8.05 a.m.
~~then~~ 88 fms.
black sand and small gravel. Good bite. mud bucket and second dory shot to be second dory caught ---

Run 1 mile Eastward on same line and shot to be dory

1914

Chr. 29 (13) × 8.15 a.m.
H. 5378 92 fms.
black mud ad gravel
Stopped first day here at 8.30 line
set in South ~~Easterly~~ direction Wind N by conv.

Second day stretched first.
First day caught.

79 (14) × 12.25 p.m.
182 fms.
black greenish mud ad sand

80 (15) × 1.05 p.m.
130 fms.
broken rock ad mud.

81 (16) × 1.50 p.m.
81 fms.
Rocky, pieces rotten rock imbedded in lead
coarse ad fine gravel. Wind 25 miles

82 (17) × 2.18 p.m.
80 fms. lead on bank in failed pro-
peller lead to ~~bank~~ line.

83 (18) × 3.20 p.m.
138 M = 76 fms.
rotten rocks as in (16)

1914

Chr. 29 (19) × 3.45 p.m.
H. 5389 110 meters = 60 fms.
hard ~~blue~~ mud, one rock fragment no shell mud

85 (20) 4.05 p.m.
112.0 M. = 61 fms.
mud, no sand.

86 (21) × 4.32 p.m.
122. M = blk. S.?
coarse, grey sand and fine gravel.

87 (22) × 5.10 p.m.
115.00 M = 63 fms.
hard mud.

88 (23) 6.00 p.m.
100 M. =
No bottom sample lead lost on bank in.

9 Fishing trial indicating direction of set.

Courses
True bearing N. 72 W. (# 1, 2, 3, 4, 5)
" " N. 24 E. (# 6, 7, 8, 9)

April 30 — 1914)

1914
Apr. 30 ① 1 p.m.
H. 5389 111 M. = 61 fms.
grey mud.

90 ② × 1.37 p.m.
122 M = 67 fms.
broken rock + grey mud.

91 ③ 2.04 p.m.
64 fms.
black sand + mud.

92 ④ × 2.24 p.m.
113 M. = 62 fms.
Good bottom, black sand, (depth 5 fms off
should be thin mud decker, pointer slipped
think W.L.S)

93 ⑤ × 2.46 p.m.
131 M. = 71 fms.
grey? mud.

94 ⑥ 3.22
146 M = 79 fms
grey mud.

95 ⑦ × 3.49 p.m.
149 M = 81 fms
hard grey mud.

Apr 30 {2.03 and 2.23 p.m. were good and better bottom
respectively, approached vicinity of 4.32 p.m.
of Apr 29th, as was our intention we wanted
to cross Westerly.

1914
Apr. 30 ⑧ × 4.52 p.m.
H 5396 152 M = 82 fms.
black sand and green mud.
Soft bottom fish have been caught on this zone-
times

97 ⑨ 5.51 p.m.
156 M. = 85 fms.
soft gn. mud. blk. S.

1914

Fe May 2nd ① 12.00
Fe H.5398 95 fms.
green mud

Fe

99 ② 12.17 p.m.
83 fms.
Fe green mud, as above.

H 5400 ③ 12.34 p.m.
green mud
90 fms.

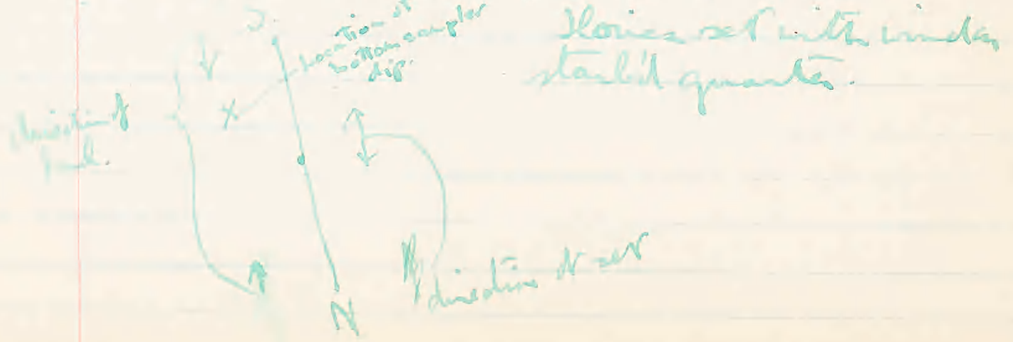
1 ④ 12.52 p.m.
98 fms.
green mud.

2 ⑤ 1.15 p.m.
96 fms. bottom getting softer
green mud, fine gravel.

3 ⑥ 1.28 p.m. pulled up shrimps of green mud on trawl line
96 fms.
blacks sand & green mud. (beginning to peter out.
2 boxes over at 1.35 - 1.40 p.m.

Mud bucket was tried.

Bottom sampler at 2.30
was also filled on sides as usual.



1914

May 2 Second dray brought up fine sand rocky bottom
H. 5404

⑦ 4.49 p.m.
84 fms.
hrd. grey mud one small shrimp.

5 ⑧ 5.05
82 fms.
Rocky. R.

6 ⑨ 5.27 p.m.
89 fms.
green mud, as above.

7 ⑩ 5.38 p.m.
96 fms.
green mud.

8 ⑪ 6.18
96 fms.
green mud.

9 ⑫ 6.56
96 fms.
green mud.

10 ⑬ 7.35
93 fms.
hard bottom, green mud

1914

May 3 (1) 9.29 a.m.
H 5411 101 fms.
green mud

12 (2) 10.07 a.m.
96 fms.
green mud

13 (3) 10.45 a.m.
88 fms.
green mud.

14 (4) 11.20 a.m.
83 fms.
green mud

15 (5) 11.40 a.m.
83 fms.
green mud.

16 (6) 11.57 a.m.
92 fms.
green mud.

17 (7) 12.22 p.m.
85 fms.
green mud

18 (8) 12.58 p.m.
92 fms.
green mud

19 (9) 1.40 p.m.
100 fms
green mud.

1914

May 3 (10) 2.20 p.m.
H. 5420 112 fms.
green mud.

21 (11) 3.00 p.m.
109 fms.
green mud.

22 (12) 3.55 p.m.
103 fms.
green mud.

23 (13) 4.56 p.m.
99 fms.
green mud.

24 (14.) 5.46 p.m.
108 fms
green mud

25 (15.) 6.28 p.m.
~~Hell~~ 98 fms.
green mud

26 (16) 7.07 p.m.
106 fms.
green mud

Bottom samples wet;
12 in. sample 49 seconds
down, 1.57" wire.

Saw lots of birds during first few stations, this cold saw two salmon jumps

May 4 (1) 6.09 a.m.
H.5427 100 fms.
green mud

28 (2) 6.29 a.m.
98 fms.
green mud

29 (3) 7.32 a.m.
100 fms.
green mud
} Saw lots of birds, during first several stations. This cold saw two salmon jumps.

Lost lower + shackles + swivel, broken

30 (4) 8.34 a.m.
98 fms. Hydrog?
hard blue mud.

31 (5) 8.49 a.m.
100 fms.
green mud.

32 (6) 9.25 a.m.
97 fms.
green mud.

33 (7) 9.56 a.m.
95 fms.
green mud.

34 (8) 10.35 a.m.
95 fms
soft. green mud.

May 4 (9) 11.08 a.m.
H.5435 95 fms.
soft. green mud.

36 (10) 11.41 a.m.
97 fms.
soft. green mud.

37 (11) 12.11
87 fms.
soft. green mud.

- of Valparaiso Chile

After passing schooner 58 days out saw about 3-4 whales. at 4 p.m.

1917

May 5 (1) 5.01 a.m.
H.5438 51 fms.
hrd. gr. mud.

39 (2) 5.21 a.m.
47 fms.
blk. S.

40 (3) 5.35 a.m.
49 fms.
blk. S. (in 2 small heads gravel

41 (4) 5.45 a.m.
43 fms.
(brk. bot.) black sand. +M

42 (5) 5.56 a.m.
49 fms. hrd. bot. clean lead.

43 (6) 6.08 a.m.
50 fms. hrd. M.
brk. bot. (dead shell = worm Lds)

44 (7) 6.21. am.
61 fms.
gravel bottom

45 (8) 6.32
62 fms.
hard pan, bottom not so good

46 (9) 6.48 a.m.
61. fms.

1917

May 5 (10) (Seven and Ten are in same place.
H.5447. 6.58 a.m.
61 fms.. first drag down.

48 ~~49~~ (11) on sounding ~~coasts land~~. Then.

49 ~~48~~ (12) 10.23 a.m. 48
62 fms.
hrd. mud.

50 ~~48~~ (13) 10.40 a.m.
65. fms.

51 ~~49~~ (14) 11.18 a.m.
54 fms (Sun dark) (about depth
ugh. m.

52 ~~50~~ (15) 12.01 p.m.
65 fms.

53 ~~51~~ (16) 12.14. p.m.
72 fms.
fine. sand and mud.

54 ~~52~~ (17) 1.25 p.m.
79 fms.
green mud.

55 ~~53~~ (18) 2.08 p.m.
82 fms
hrd. mud, fine gravel

1914

May 5 cont. (19) 2.20 p.m.
H. 5456
56 78 fms.
hrd mud.

57 58 (20) 79 fms.

} was 5556, 5557?

58 59 (21) 3.22 p.m.
162 fms.
green mud.

59 60 (22) 4.08 p.m.
135 fms.
grn. mud.

60 61 (23) 4.53 p.m.
89 fms.
broken rocks (hrd. bottom)

61 62 (24) 91 fms.
gravel and mud.

62 63 (25) 92 fms.
grn. mud.

63 64 (26) 84 fms.

5.43 p.m.

64 65 (27) 85 fms.
green mud.

1914

May 5 cont'd. (28) 5.55 p.m.
H. 5465
65 89 fms.

66 65 (29) 6.07 p.m.
89 fms.
green mud; hand lead.

67 66 (30) 91 fms.
green mud.

68 67 (31) 6.41 p.m.
90 fms.
green mud.

69 68 (32) 6.58 p.m.
89 fms.
hand lead.

70 69 (33) 7.16 p.m.
90. fms.

5556 5551

5512

1914

May 6 ① 6.36 a.m.
H.5470 47 fms.
54.71 grs. sd. sand.

72 71 ② 6.55 a.m.
45 fms.
gby. sand, fine gravel

73 72 ③ 7.03 a.m.
45 fms.
gy. sand.

74 73 ④ 7.12 a.m.
44 fms.
gby sand + gravel

75 74 ⑤ 7.19 a.m.
41 fms.
gy. sand.

76 75 ⑥ 7.27
40 fms. hrd. bottom
R. and gy sand.

77 76 ⑦ 7.35 a.m.
38 fms.
fine gravel + gy sand

78 77 ⑧ 7.41 a.m.
39 fms.
gn. mud.

79 78 ⑨ 7.48
35 fms.
hrd. mud.

1914

May 6 cm. ⑩ 7.55 a.m.
H.5479 30 fms.
80 hrd. bott. coral.

81 80 ⑪ 8.02 a.m.
33 fms. } baggywalks.
hrd. bottom.

82 81 ⑫ 8.10 a.m.
38 fms.
hrd. — brk. shells.

83 82 ⑬ 8.16 a.m.
40 fms.
R.

84 83 ⑭ 8.27 a.m.
44 fms.
hard grey mud, blk Sand.

85 84 ⑮ 8.36 a.m.
48 fms.
fine blk sand blk specs

86 85 ⑯ 8.47 a.m.
54 fms.
fine blk. sand.
broken bottom

87 86 ⑰ 8.55 (H.5486)
57 fms.
blk. S. brk. shells
No. 1 dredge with Kullihers all on Surface
Water in fathometer tubes.
Kullihers on outside and.
Set out + worked back.

1914

May 6 (18) 11.17 a.m.
H. 5490 64 fms.
88 blk. S.? lead perfectly clean.

89 (19) 11.44 a.m.
61 fms.
~~sand~~. blk S. fine G. } Crs. S. and M.?

90 (20) 11.54 a.m.
61 fms.
M and fine gravel

91 (21) 12.0 7p.m.
61 fms.
M. coarse sand

92 (22) H 5490
62 fms.
hrd. blk. sand.

93 (23) 5.27 p.m.
76 fms.
hornstone bottom.

94 (24) 5.33 p.m.
72 fms.
fine black sand.

1914

May 7. (1) 4.40 a.m.
H 5495 52 fms.
95 gy sand.

96 (2) 4.52 a.m.
55 fms.
fine gy sand.

97 (3) 5.09 a.m.
60 fms.
gy sand.

5598 (4) 5.30
63 fms.
fine gy sand.

5599 (5) 5.41 a.m.
65 fms.
gy sand.

550099 (6) 5.55 a.m.
67 fms.
hard bottom.

H.5500 (7) 6.10 a.m.
5506 69 fms.
gy sand

2X (8) 6.25 a.m.
71 fms.
hrd

3X (9) 6.41 a.m.
71 fms.
vgy. sand.

1914 contd

May 7. (10) 6.55 a.m.
H.5504 71 fms.
sand hrd bot.

5 (11) 709
71 fms.
hrd bot.

6 (12) 7.25 a.m.
68 fms
gy sand.

7 (13) 7.40 a.m.
65 fms.
gy sand

8 (14) 754 a.m.
60 fms.
Sand.

9 (15) 8.09 a.m.
55 fms.
gy sand - shells and 1 mill C. gausapata.

5510 (16) 8.24 a.m.
55 fms.
gy sand

11 (17) 8.37 a.m.
60 fms.
gy sand

12 (18) 8.52
53 fms
gy sand

May 7 cont. H.5513	(19)	9.03 a.m. 51 fms. gy sand	
14	(20)	9.20 a.m. 49 fms gy sand	
15	(21)	9.33 a.m. 45 fms gy sand.	
16	(22)	~~9.~~ 9.50 a.m. 46 fms. gy sand	
17	(23)	10.05 48 fms. gy sand	
18	(24)	10.17 48 fms. gy sand.	
19	(25)	12 24 p.m. 51 fms. gy sand	
20	(26)	12.41 p.m. 51 fms gy sand + bedsen shells.	
21	(27)	12.57 49 fms. Mcrs. sand, fine gravel	

May 7 cont. H.5521	(28)	1.13 p.m. 48 fms. gy sand	H 5520
23	(29)	1.29 p.m. 47 fms. gy sand.	
24	(30)	1.44 p.m. 44 fms. gy sand.	
25	(31)	2.00 p.m. 42 fms. gy sand.	
26	(32)	2.07 p.m. 40 fms. gy sand.	
27	(33)	2.18 p.m. 34 fms. gy sand.	
28	(34)	3.01 p.m. 50 fms. gy sand.	
29	(35)	3.17 p.m. 52 fms. gy sand	
30	(36)	3.32 p.m. 50 fms. gy sand.	

1914

May 7th (37) 3.50
H. 553 ϕ 48 fms.
gy sand

32 (38) 4.04
49 fms.
gy sand.

33 (39) 4.27
47 fms
gy sand.

34 (40) 4.52 p.m.
48 fms
gy sand.

35 (41) 5.22 p.m.
51 fms
gy sand

36 (42) 6.02 p.m
56 fms
gy sand.

37 (43) 6.39 p.m.
59 fms
gy sand.

38 (44) 6.56 p.m.
62 fms
hard clean load

39 (45) 7.07 p.m.
62 fms
hard.

1914

May 7 (46) 7.37 p.m.
H. 555 ϕ 57 fms
gy sand.

40 (47) 8.06 p.m.
55 fms
gy sand.

Yelow O = buoy 6

made .19 - 20 - 21
came back to 20 (called it
22 and made 21

1914

May 8 H.5542	①	6.30 a.m. 51 fms. gy sand	1
43	②	6.57 a.m. 48 fms. gy. S.	
44	③	7.30 a.m. 47 fms. gy. S.	
45	④	7.58 a.m. 50 fms. gy sand	11
46	⑤	8.22 a.m. 52 fms. ~~gy~~ hrd.	
47	⑥	8.50 a.m. 52 fms. gy S.	9
48	⑦	9.24 a.m. 62 fms. ~~sand~~ hrd. (sand? hard bottom (lead) practically clean)	7
49	⑧	9.37 a.m. 66 fms gn. mud.	8
50	⑨	9.51 ~~fms~~. a.m. 68 fms. mud and sand	1

1914

May 8 H.5554	⑩	10.06 a.m. 72 fms. gn. mud.	5
52	⑪	10.19 a.m. 75 fms. gn. mud	5
53	⑫	10.52 a.m. 79 fms. gn. mud.	1
54	⑬	11.28 a.m. 83 fms aff. gn. mud.	
55	⑭	12.00 noon 86 fms aff. green mud	1
56	⑮	12.34 p.m. 78 fms. R.	
57	⑯	12.47 p.m. 94 fms. aff. gn. mud	
58	⑰	1.03 p.m. 79 fms mud and sand (+ small pieces of lbs gravel)	
59	⑱	3.43 p.m. 82 fms aff. gn. mud	

R.M.S.

1914

May 8	(19)	4.16 p.m.			
11.55	60	85 fms.			
		soft. gn. mud.			
61	(20)	4.51 p.m.			
		81 fms.			
		soft. blue M			
62	(21)	5.23 p.m.			
		88 fms.			
		soft. gn. m.			
63	(22)	5.35 p.m.			
		89 fms.			
		hrd.			
64	(23)	5.54 p.m.			
		95 fms.			
		blk. S.			

1914

May 27

65	(1)	3.06 p.m.	24 fms	wht. s.		
66	(2)	3.16 "	29 "	" "		
67	(3)		30 "		1 lbs. per 1 skate ea.	
68	(4)		31 "	gy. S.	1st drop	
69	(5)	3.46 p.m.	34	"	2nd "	
70	(6)	5.38 "	" "	"		
71	(7)	6.06 "	38 "	"		
72	(8)	6.31 "	39 "			
73	(9)	6.~~53~~ "	40 "	gy. S.		
74	(10)	7.17 "	44 "	"		
75	(11)	7.40 "	50 "			
~~76~~	(12)	8.03 "	55 "			

~~May 28~~

5610	(9)	75 fms.		blk. S. G. bottom good.	
11	(10)	67 "	8.51 a.m.	blk. S.	
12.	(11)	67 "	9.00 "	hrd mud & 1 shell.	
13	(12)	70 "		hrd gn. mud.	
14	(13)	71 "	9.32 a.m.	hrd gn. mud, lead pounded rotten rock.	

cont'd page 108

1914

May 28

55 77	(1)	56 fms.	7.40 a.m.	gy. S.	
78	(2)	61 "	8.07 "		
79	(3)	66 "	8.32 "	gn. M.	
80	(4)	60 "	8.57 "	clean lead.	
81	(5)	65 "	9.10 "	R.	
82	(6)	61 "	9.20 "	"	
83	(7)	64 "	9.27 "	R.	
84	(8)	55 "	9.37 "	blk. S.	
85	(9)	58 "		blk. S.	
86	(10)	56 "	10.02 a.m.		
87	(11)	59 "	10.17 "	G. & hrd. M.	
88	(12)	61 "		clean lead, hrd?	
89	(13)	66 "	10.40 a.m.	hrd gn. M. & G.	
90	(14)	68 "			
91	(15)	79 "	1.20 p.m.	M.	
92	(16)	133 "	1.35 "	good bottom.	
93	(17)	133 "	~~2.45~~ "	blk. S.	
94	(18)	109 "	2.10 p.m.		
		1 lb. double banked reel, 2 skates, salt herring.			
95	(19)	115 fms.		R. blk. S.	
96	(20)	115 "		gn. M. & S.	
97	(21)	79 "	5.40 p.m.		
98	(22)	84 "		hrd. gn. M.	
99	(23)	94 "	6.55 p.m.		
5600	(24)				
1	(25)				

May 29

5602	(1)	46 fms.	4.53 a.m.	gy. S.	
3	(2)	55 "	4.59 "		
4	(3)	63 "	5.33 "	clean lead gn. M. washed off.	was double lead
5	(4)	70 "	6.14 "	sft. gn. M.	
6	(5)	75 "	6.51 "	" " "	
7	(6)	68 "			
8	(7)	62 "		blk. S.	
~~9~~	(8)	65 "	7.57 a.m.		

cont'd page 106.

May 28

5615	(14)	79 fms.	9.47 a.m	gn. mud, sand.
16	(15)	100 "	10.02 "	
17	(16)	170 "	10.17 "	arming dropped out of lead.
18	(17)	124 "	10.49 "	blk. S., fne G. 2 skates, 1 hr.
19	(18)	100 "	11.10 "	blk. S., double banked sol

H. 5564 blk. S. + Columnia
May 8, 1914
fragments of lava coarser
sand than bot of 5426.
very closely related
minerals as capchale Lava
same thing can be accounted
May remarks

5437
May 4, 1914
dustless miocene?
5403 seand something fold do good
layer of shale + limestone or else concretion
very little terrigenous material
diatom consequently
occurs in little lumps unaffected by acid HCl

May 5, 1914
5561 capt Blumd same general
constituents of 5564 but in a way
naturally separated.
larger grains very similar 5426
little more clay more finely
than either 5564 or 26
[illegible]

May 3, 1914
H 5426 dredged sample about 12 inches
bottom 3" bottled with portion from
tube.
part of these 3 inches separated
mostly terrigenous sand.
Seem to be volcanic, not volcanic
glass is not sponge spicules
a radiolarian

adapt metal

part of surface separated dried + ex.
Top is of same constitution as
bottom sand.
great many sponge spicules
+ diatoms.
both more coarse than mud
top more coarse than bottom sample
of same tube

with HNO3 #1 = May 29, 1914 5377 = 77 many organic remains
#2 = 5403 probably lethal diatoms
May 5, 1914 except spicules
nothing but organic
remains
sometimes diatomaceous shale,
round + rectangular, coarse + fine mesh diatoms

5386 different, pronged spicules, flagg
Apr 29, 1914 numerous foraminifera dead + broken
tests
don't see any magnesia
has feldspar + quartz

5367 also branching sponge spicules
Apr 29, 1914 different kind of material, is fine
sand but small stuff seems to be of
diff constitution

5521 May 7, 1914 at narrow place
more like South Skupp.

5472 May 6, 1914 quartz, chert,
not minerals found in Colo R

5544 May 8, 1914 more like Col River stuff
same minerals
foliations about the same.

Olympia Oyster Beds.

Mud Bay June 23
Oyster Bay some and June 24
different " 25
South Bay " 26

#
June 23-14, 1 Blue Pt. Oyster Co., June 23-14—
8.50 a.m. 5-6 ft. Ebb 54.3° 26.62 beds.
Eastern oysters salinity + temp taken outside of

2. do. 9.10 a.m. 2 ft. Ebb. 58.6°; 28.46
#1 & 2, on these beds Eastern oysters made as much and more growth as in East. (By comparison of two year old Eastern with one year old of brought over previous year. (3 can loads covered ½ acre

3 Blue Pt. Oyster Co's Bed:
11:25 a.m. Ebb. 26.74
4 do. 11:45 a.m. Ebb. 66.0°, 26.69

5 Blass' Oyster Bed 12:18 p.m. Ebb. 66.6°, 27.43.
6 Off Blass' House 2:50 p.m. 1½ ft. Flood. 62.6°, 26.89.

June 24, # 7 Outside Sower bed in channel "Hope Ground" Blass.
11:25 a.m. 1½ ft. Ebb. 63.4° 28.05
On Hope ground picked up a piece of alder or willow with good catch of spat.
Note: Steele's bed had excellent catch of spat on clam shells used as spat collectors.

June 25, # 8 "Olympia Jim" grounds Blass
12:10 p.m. 1 ft. 65.2°, 27.94

9 Olympia Oyster Co's Bed, Corner of 2nd dyke at rt. Ls
Lr main dyke. 10.35 a.m. 1½ ft. 66.3°, 27.91.
10 do. N corner of main dyke. 11:35 a.m., 67.8°, 27.90
11 do. S.E. corner of Eastern Oyster trial bed.
12:35 p.m. 69.7° (L 70.7° + R 68.7°) 25.61
June 26 # 12 South Bay By dyke near Canal House
11:20 a.m. 63.4°, 25.19
13 do. near N.W. corner of Big dyke
12.08 p.m. 1½ ft. 65.8° (L 66.7 + R 64.6) 24.43

1914
Apr. 29 7.50 a.m.
5376 diatomaceous shale.

5387 Apr. 29, 1914 do quite a bit of mineral material
slightly more sandy.

5384 Apr. 29, 1914 do.

5383 Apr. 29, 1914 limestone

5384 Apr. 29, 1914 do like banded rock
H 5403

5380 Apr. 29, 1914 with mineral stuff

5371 & the last.
Apr. 29, 1914

June 26-14, # 14 South Bay northernmost Bed.
12:52, 1 ft. 70.9° (L 72.6° + R 68.6°) 25.48.
15 Repeat of No. 12. 1:20 p.m. 66.6°, 25.82.

{ Temp. has reached 90° in this trial bed.
do high on beach that it has gone ten days without tide running in.
does water get stagnant

5444 May 4, 1914

5395 apr. 30, 1914 near 76 in Okanagan

5393 apr. 30, 1914 do

5390 apr. 29, 1914 more earthy than above

5370 apr. 29, 1914 limestone

5377 apr. 29, 1914 do

5555 May 8, 1914 L.S.

1914
July 10 In Portland visited Elecrah.

Sanitary Fish Market

~~Seacoast~~ Malarkey & Co
Fish dealers
disposed of 1/3 Elecrah catch (90.000?)
32,000 at 3¼ ¢
5,000 hg 2 @ 2½ } Reed's figures to
2,000 chickens @ 2¼ } Voeth.

Had conference with Reed and Bailey owners of E. Elecrah.

Became interested through efforts of R. E. Voeth Yaquina Bay Dealer salesman and began fishing (Elecrah) for 7,000

Voeth commanded first three trips but had four sailors.

Johnson from Tacoma is command of Pressed coal ~~for~~ vessel for three trips following Voeth.

Portland boats for were getting the inferior fish from Seattle (2nds and culls)

1914
July 11 Saturday night landed in Newport.

July 12 Talked with Sidney Vancer of Ulph Steely, Ice Corporation, Oregon state. Voeth Chambers.
Capt. Olaf Johnson of Viking {1900 lbs Halibut 2700 " 10.000 " Halibut and Salmon trout}

July 13 1914 (1) XII Left Newport 1.20 p.m. after getting gear in shape.
Gas boat "Gazelle"

Made 1 Sh. set, with 1 shot of gear. (shiner) N.G.
Yaquina St. ~~West~~ East; 9 miles {sand bait / rock bait}

Made set at 3.30 in 30 fms. and put Kapok lines over at 4.40 used fresh bait shiners = surf perch.

Snarl hauled at 4.55
1 skate 4½ ft.
2 " 2½ (one of these female)
2 " 3 " (all these = female)
9 Ferret fish
1 Scratch jordani

On board Jones (6) Voeth 1 halibut 10 lbs
1 skate 9 lbs Scratch jordani

Ran by dories of Elecrah picking up buoy heaving back 6 shots to the dory, made a long set (hauled at about 2 p.m.) set on coarse grey sand 35 fms. (W. ¼ N. 6 mi. Yaquina Lt.
Catch Thicker about 6,000 lbs
One dory caught about 500 lbs to skate 4½

Kaisy left July 13 for Seattle.

July 13 "U and I" took
7 halibut 40-50 lbs.
3 orange rock fish
3 ling cod.

" "Sea dog" 3 halibut,
7 orange rock fish.

July 13 "Alcorah" took 6,000 lbs.
July 14 took about.
1,500 lbs to the dory 6 skates each
long set.

Alcorah took
1st 9,000
2nd 12,000 } Rock
3d. 16,000
4th 20,000 } Johnson — early in June
5th 40,000 } Johnson — after the middle of July
6th — middle of July — Last Clipper we were down

Fishing. Caught 19,000 landed
" 27,000 took to Seattle, then
5 large fishing of Sunday July 12 + then July 13 (10,000)
Took about 38,000 to Seattle.

Zillah May in April (with Alcorah above) 27,000 lbs
Alcorah Banks.

July 14 (2) XIII left dock 7.00 a.m. (after being held up one hour by rough bar and fog.) Yaq Lt. E. x S.
Prospected with hand lines (6)
Fished bet. Alcorah and shore
Caught on hand lines
1 halibut 15 lbs. (Stomach contents saved)
1 " 45 "
1 rock salmon

Drawn gulf herring bait.
34 halibut largest about 85 lbs (62 inches)
one had other small in stomach
2 rock salmon
8 Pennatulids
1 red sea anemone with shells attached
body broken + crushed (thrown away)
3 large skates 3-4 ft.
2 orange rock fish
2 ling cod.
Put over at 11 a.m hauled at 2.20 p.m.
3 skates gear.

Set in skate small gear (for flounders)
9 halibut (mouths small)
3 star fish
3 orange red fish
3 skates about 2 feet 2½ ft.
1 sea anemone on plaice, smaller, tied with kept one shell (dead) was a host for a number of sponge of varia in another variety
2 pennatulids.

July 15 Unsettled weather and foggy first part of forenoon.

1914

July 20 Hazy weather inclined to be foggy smooth sea moderate swell

(3a) XIV Set one skate gear, called having hauled 8.15 a.m.
Yaquina light T. S 3/4 W
" Big old tower Ldr E and N.E mark
(Veth E x N.)
bottom coarse grey sand pur black specks as in haul further out
25 fms.

(3b) XV Sounded at 9.15 38 fms.
coarse grey sand.
Old tower due East.
Siletz E.N.E.
Yaquina tower E 3/4 S.
Put out 2 skates and small gear.

Cr 9.55 ~~inside~~ Buoy scalloped. Hauled in 20 minutes. Did not trawl for it. Caught one small fish, put on ice took in Otter trawl. Back of this cr

Cr. 10.35 Tried again ~~30 min~~ caught another a few worm tubes. Encrusted with eggs.

While drifting through second haul used 6 hand lines. Caught
5 Rockfish 3 pole 4 ordinary red fish
1 live scallop 6 in. in diam.

Bottom Temp - L 46 R. 46.1

July 20 (cont'd)

Hauled shale, lu
Steady bait feed
quantfish and tope s
bait on off shore

Halibut 11
Codfish 1 (3½ f
Sole 1
Starfish 2 (one 2
with the

Orange red fish 1
Pen Satulid 1

On small gear
fresh bait) (2

halibut	14
sole	13
orangered	35
sea anemones	1
dog fish	6
skates	3
starfish	1 (20

First skate set

halibut	6
skates	12 (mostly
[illegible]	9

Yesterday on July 20 400 lbs dressed halibut

1914

July 21. Sett. 8.45 Windy, clear, [illegible]
[illegible] or windy towards

[illegible] from shifting berg
[illegible] at 9.40
[illegible] at 10.10
[illegible] skate [illegible]
[illegible] didn't catch a
[illegible]?)

[illegible] of poor quality
[illegible] bait dealer
[illegible] were old ice but
[illegible] used as together
[illegible] healthy from storage

[illegible] from bergs in ice
2 halibut.

[illegible] } 4 lines
[illegible] }

at 12.39
[illegible] as anchor gang
[illegible] in 20 all sp trawl.

[illegible] miles S.W. of
[illegible] or 7 miles S.W. of old town)
[illegible] ally all caught on fresh bait

orangered fish 1111
Pen Satulid 1

skates	29	2 orangedam	4
ling cod	4	white sea anemone	1
dog fish	2	red " "	2

1914

Halibut Survey
Wainwright - Run by Mr. Alexander

1

Apr. 12 Underway at 6.00 a.m. sent last mail ashore at
5.30. Clear and bright ship pitched but little
B.N. Reyn at 8.4.
B.N. Arena at 3.30
B.N. Bragg

Apr. 13 Johnston said he saw a whale.
Arright saw 3 or 4 of the striped or
common porpoise, noticed their peculiar
edge of fin was white.
Lagenorhynchus obliquidens Gill
Moderate sea

Apr. 14 Moderate sea, 8 a.m. long rolling sea 1 rough.
12-4 p.m. Fresh S.E. gale with heavy sea
running. 4-6 p.m. Fresh S.E. gale.
Steaming full speed N. 39 W. (P.S.C.)
wrote 12.26 when ship was hove to heading S

1914
~~1913~~

Halibut Survey
Wastabee - Run by Mr. Alexander

Apr. 12 Underway at 6.00 a.m. sent last mail ashore at 5.30. Clear and bright ship pitched but little
P.R. Reyn at 8.41
P.R. Arima at 3.30
H.M. Bragg

Moderate sea

Apr. 13 Johnston said he saw a whale
Arrington saw 3 or four of the striped or common porpoises, noticed that posterior edge of fin was white
Lagenorhynchus obliquidens Gill
Moderate sea

Apr. 14 Moderate sea, 8 a.m. long rolling sea 1 rough. 12-4 p.m. Fresh S.E. gale with heavy sea running. 4-6 p.m. Fresh S.E. gale.
Steaming full speed N. 39 W. (P.S.C.)
Wind 12.26 when ship was hove to heading S.

~~Moderate sea~~

1914

Apr. 15. Moderate strong breeze from S.S.W. Sea rough. at 5.08 a.m. changed course E.N. 8 am - moored heavy squall with hail passed over in middle of watch.

Apr. 16 Anchored at 3.25 p.m.

Apr. 19 Left at 6.30 a.m. anchored in Pt. Townsend at 8.20 p.m.

April. 20 Left Pt. Townsend at 4.22 at 8.50 a.m. moored off Bonny at Seattle

April 21 Mrs. Thiercoff reported on board.

22 Recd fishing gear & 4 fishermen

23 Recd 10 of 20 bbls of salt herring [illegible] & other supplies

April 24-25

April. 26 Left underway at 6.00 a.m. light showers & rain 3.40 p.m. 4-6 squally weather with fresh to strong breezes from West. 6.45 p.m. ran into Neah Bay for shelter. Strong westerly wind with rough sea anchored at 7.14 p.m.

1914

Apr 27. in Neah Bay, underway at 4.10 p.m.
Apr. 28 Practically rigged all gear necessary for fishing with Potts messengers, mud hooks, leads & blocks, stages & saw. Johnston troughs with oyster sheds, and attended to ordinary steel bucket. Driscoll & fishermen saw to Lubber Point.

Strong rolling sea.

Apr. 29. Started work off Heceta Banks.

The night before a vessel before in fact Driscoll and I worked over the charts and mentioned the likely looking spots, & on the twenty ninth we started to round off and across the good str we picked out of the southern limit we set from investigations. This was Heceta Banks.

Halibut at this time of the year hang on the edge of the banks on a depth of from 90-100 fathoms. If fish can be any where in any quantity there is the place to look for them. So we did begin at a point to the east end of an good looking str we rounded the E. str. We did find good bottom there.

Then we rounded half a mile beyond and still struck with good bottom, though a little harder than really desirable.

Halibut seem to like a sort of mixed bottom

4

1914

Apr. 29 Soundings on Aceda Banks.
Sowed two dories at 8.47 and 9.00
Took bottom sample at 9.18.
Hoisted dories at 11.30 & 11.45.

Sea. A.M. 1-5 = M.
6-12 = S.
1-12 P.M = R.

@ 2.25 p.m. lost lead and 61 fms. wire
4-6 p.m. made preparations to ride out
moderate N.W.ly gale Lost 26 lt. lead.
6-8 p.m. hove to, wind hauling around to
westward.
8 p.m.-12 M. Steaming ahead to ride out
moderate N.W.ly gale

1914

Apr 29 of a greenish look and a texture like serpentine (I remember a greenish rock Ed once had, all look ir up at the U of W. it had shiny fracture and numerous facets shining) made up of blacks and a dark of green mud (soft-like) and small (fine) rounded black green gravel like so :....

Furthermore we saw a half a dozen whales more or less blowing at frequent intervals over the ground and numerous gulls and "hags" flying about and hovering over the water in bunches apparently attracted by food and feeding. The fishermen say this is a sign of bait that what the "hags" and whales are after. "Bait" is the food of the smaller fishes and they in turn are the food of the larger. A case of "dog eat dog".

We did strike good bottom and then rotated a half a mile beyond to see if it still held good, if it did as was the case a dory was put over to set fish while the ship went back to the first position to drop the second dory. Here we tried with the mud hucket to get a good grab of the bottom to see what good fishing bottom might be, but owing to the strong current the bucket often pranced landed on the side and in closing caught and projecting

1914

Apr 29 25cks well covered with bottom life and 2 or 3 tiny boring mollusca in it!!! additional proof of San Golden Gate bank.

(Ship To Bannon and request return).

Have started sounding at 5.02 a.m. (Had to get up at 4.00 o'clock to be on hand expected to work earlier

Very windy day, sun up, clouds few few streaks around horizon, wind about 10-20 miles per hour.

Struck on good bottom at 8.05 a.m.
blk. S. sm. G. Good bottom *
on ground.
Steamed half a mile 8.15 a.m. blk. mud and gravel, and shot sounding.

Second day down* here. Waded after in to pull lines, had most fish + halibut by weight of the latter.

First day beyond good ground got one halibut + three on first end of

1914

Apr 29

line hauled was about second fish in. Hooked one big skate but he got away. (Gladney)

Second day down which we placed on good bottom (or as near as we could find) caught 8 fish and numerous rock fish (Sebastodes rubberrimus) but even they did not count as a good haul. *

Apparently owing to heavy wind and sea the ship drifted at first three miles and so missed the whole bank of fish, "bubbly" are like steelheads always run in bunches and tend in a corner."

* Good haul = 8 - 900 lbs. to the skate of line, our dories set one skate idea being that if represented a proportional part and could be set and hauled faster enabling a prospector to cover so much more ground in a much shorter time (with a much less expenditure of time)

200 lbs. to day of 8 skates = 500 lbs. 2 skates

1914

Apr. 30. Ran in early in morning to pick up land to get a departure from.

Blew so all night that ship made such leeway that we drifted 15 miles. Nothing appear to run in took practically all forenoon, sea was comfortable with calm under the lee of the land but worked up with the wind until quite rough, had a moderate gale

made but slow headway, too rough but dories over all most too rough to land and round soundings where picked up little to South of where we left off previous day and run across good ground found toward end of days operations. Good ground was located and soundings were continued at mile intervals until bottom became mud and hence unfavorable for dahlbut

Soundings were discontinued at six o'clock and during night it was our endeavor to run parallel with line of ground picked up during day to keep from getting off. This plot as related to location as given by Captain Roth in report of E. C. Johnson.

12

1914

Apr. 30 Midnight–4 a.m. Riding out moderate N.W.b.W. gale at 12.08 sighted Hecla Head light.
At 3.50 sighted land
Cr. 8.24 a.m. Took departure from Hecla Head light.
12N–4 p.m. Soundings
See round all day
8 p.m. to 12 M rolling Mileage reg. Indicate N.W.b.W. gale

1914

Apr. 30 Moderate gale sprang up about 500 o'clock rendering rowing very difficult, increased in intensity during night and ship leaded up water in readiness to take very definite ran into Portland made Yaquina Head Southeaster about 3 p.m. at a time to late for to enable us to return to banks before night-fall which with another night's blow would force us for out of reckoning and necessitate another run in to pick up bearings; it was decided to finish out day by remaining in vicinity of Yaquina Head light and to our utter astonishment had dock ground off N.W. of Newport, on land and after five hard hours lines were reeled and fish caught as follows. — — — —

Before dinner located and could get in position for hard hand line fishing severe gale, worst yet came up and of course ship had to head out. water in. Same thing nothing but blow days in and day out and no fishing.

Buffetted around all night plotted into land in morning and picked up Yaquina Head at ____ a.m.

1914

Apr 30 – Took departure and went out to sea
may not selected.

This joins from bottom on dark looked
favorable and seemed to coincide with
those given for Mr. Johnsons date? Sounding
by Captain Roeth of the Wanderer Chief.

Nothing very favorable was found by
sounding a fairly good bottom was
located (H or — — o'clock) and
after steaming a half a mile further on
a double handed set was made, lines
were hauleded after an hour, one trawl
hauled fine from end but the
day recovered remainder, — — — —

were taken Sounding has continued
until dark 7.35.

During the night the wind increased
and remained on the ground steaming just
far enough to keep position by
lights, about [illegible] after the sounding
the weather began to thicken and we
were forced to put to sea. This

16

1914

May 1st N. Cr. 2:12 p.m.
Sea rough until 9 a.m. then M.
Overcast and foggy
Rough weather would have blown over all
creation ever stayed until 1st N morning.
8 p.m. — M. wind and sea moderating slightly

necessitated as much further running in the morning with a consequent waste of time

If the ship could only anchor and maintain her position overnight this extra burning of coal would not be the rule result

But the Albatross could hardly be refitted owing to the lacked space, to be so fitted would need very heavy cable and hoisting device capable of reeling in the full length of 400 fathoms in a very short space of time.

All Fishery schooners are so fitted.

If you don't have a sleeve blow it of which you can't see through.

May 2. Yaquina Head light. Took departure from at 9.12 a.m.
12.17 Commenced sounding.
Lowered two drops @ 1.35
@ 2.52 hoisted in one drop; 43.1 hoisted in second drop, continued sounding.
Sea moderate, Ship tossing off Yaquina Head

May 3 Heavy mist and haze wind light from S. W by W. to W. by N. Mist clearing out at 6.45
Soundings began @ 9.25 delayed because of fog and distance run ascertained.
Foggy weather has cause of late start

May 4. Sea too dirty for sounding. Cape Meares light in sight, were able to take soundings depth reaching without success in approaching.
At. 7.10 fathoms on 4 ft. wire, double cored Sounding net used 4 fms. cable, tape used
1 pm ranged up alongside & sailed actg
(Acting Master. W. H. Warston of Portland Oregon
58 days from Valparaiso, hoisted to be reported.

1914

May 5 Sounded around stuck a good bottom.
Just down down near last bottom, set buoy mile

Bottom had a little good around here & there, nothing but dog fish.

Second drop in worse bottom

fewer fish, every once in a while a fine one.

Dog fish almost every throw

1914

May 5: Set on #10 (=#7)

for dory set for southard

2nd dory at #11 set for S.
paralled for first dory and ½ mile away.

#2 Trawl broke near end went for buoy &
after end.

This morning stood down for anchor +
50 fms. buoy line on hard bottom also ran
into patches of stringy mud bottom

Took departure from Heceta head light
4 00 a.m. Sounded lowered dory 0 0 1 at
7.07 lowered second dory.
Hoisted dories at 10:07. Set off
Yaquina head for the night

Dant lines ~~are~~ ~~underwater~~ steering gear was
temporarily ~~repaired~~. 1 Red Rock fish 10 lbs.
2 " " " 7 + 8 lbs.

Ran out from Yakima Sept. 5.37
arrived
Lowered first dory at 8.39 and record
at 8.55 had had 4 lines up. Put
Five lead lines both 7 and 8 pole fish
10 + 7 and 8 lbs.
~~Lowered for~~ 10.55 Lowered first dory at
11:17 record.
12.26 Lowered 2nd dories
1.55 Lowered first dory
3.05 Lowered second dory
5:06 Took water sample.

Steam 1 gas buoys down. Log 6.
Sept 6 Off Yaquina Light.

Set main 4 head lines each side.
1 double fish — 1 long end.

1914

May 7 Took departure from Yaquina light at 4:25 a.m.
4:52 commenced sounding
Lay off Cape Mears for night

May 8 Took departure for Cape Mears at 5:15
Light equally bold on port bow 8-N.W.
Sounded during 1:14 and 1:15
1:15 Took water Temperature
Took bottom sample
3:05 Sounded during
3:08 for
drizzling rain all during 8-12 M
watch.

1914

May 8: (Struck little patch of hard bottom not much on station #15 made #16 round. ran back to #15 (= #17) mud and few specks of gravel n.g. bottom.

July 20 (cont'd)

Hauled skate, well cleaned off hook. Single bait used on instead 1/2 skate. Got fish on 3 skate skate, 1 then on each hair on off shore end.

Halibut	11
Codfish	1 (3½ ft.)
Skate	1
Starfish	2 (one 20 rayed; one 5 rayed) with the feet of 14th. Both were with depressed centr.

Orange red fish	1
Pen Satulid	1

On small gear ap, 2 lines, hooks 36" apart. Fresh bait, (Skates = short perch)

Halibut	14
sole	13
rayed	35
sea cucumber	1
dog fish	6
skate	3
star fish	1 (20 rays)

First skate set hauled at 2.30 p.m.

Halibut	6
Skate	12 (mostly large)
Cucumber	9

Weather cold on July 20 400 lbs dressed Halibut

1914

July 21 XVI (4) 45 fms

Sett. 8.45 Windy, clear & fair, increasingly foggy & windy towards evening.

Headed S.W. x W. from Whittier Bay. Began to get gear at 9.40

Small skate down at 10.10

Outstrand of each skate had 1 or 2 halibut & one dogfish caught a thing (chaffed togie?)

Herring bait used was of poor quality, stomachs all eaten out by bait, & after shaping bait fish were old & soft in texture. Squid used at 2nd set had been taken directly from storage.

{ On July 20 Pilgrim brought in 2 halibut
July 21 Orabell 2 halibut.

On hauled lines caught 4 lines
red, orange fish

Hauled 3 skates at 12.39

Found worm tubes on anchor gang, bird on eyes today in 20 all up trawl.

Picked down 7 miles S.W. of the Whittier Bay. (about 7 miles S.W. of old Tower) bait well gone practically all caught on fresh bait (herring)

halibut	39	sole 1	orange red fish 1111
skates	29	20 rayed skate 4	Pen satulid 1
king crab	4	white sea anemone 1	
dog fish	2	red " " 2	

July 21 (contd) hauled small gear at 2.20 p.m.

halibut	6	orange red fish	4
dogfish	2	red sea anemone	1
skates	3	white " "	1
sole	4		
5 pt. stars	1		

3 9
4 9
3 5 1
3 5 6
1 9 1 1
3 1 9 1 1

July 24

July 24

XVII

(5)

Sounding at entrance end of ~~Halibut~~ Flat sand 44 fms.
at 10.30 set 2 skates and 2 lines
Skies clear, some salt herring
11.00 pulled over scallop rig for 15 min.
caught 1 scallop.
12.30 again for 15 min = blanks.
12. – 1230 = blanks.
Sounded at entrance end of skate = 38½ fms (fine gy. sand.)
Water sample R. 45.8; 2.460
1 p.m. hand lines caught 2 halibut 60 and 15 lbs and 2 orange red fish.

P N { 60 lb. halibut had in stomach: 1 skate, 1 halibut, 1 sole, 1 herring
15 lb halibut had lemon sole in stomach

Gear hauled at 2.15 p.m.

halibut	27
lying cod	2
skate	8
orange red fish	9 (one had smelts in stomach)
20 ragged star	2
flounder (ele)	3
Tergastrid	6
Polymia	1 (2" in dia)

4
2 8
6
1 6 8
6
2 7 2 8
3 6 4

July 24 Steaming to S.W. of Whittle where
were the gear set

July 25 Sett 12.40 p.m.
Very foggy and misty all morning set gear at 1.40
⑥ XVIII
4- Handliners over at 2 p.m. Took
1 large 4/1 (male) skate
1 " female "
1 dog fish (head & fresh and 2 partially digested herring)
4 1 dog (one with herring in stomach)
1 orange red
1 4½ arm (long) octopus)
Set made about 6 miles W of Seal Rocks
Hauled gear at 4.00 p.m.
2 skates & gear.
(frozen bait used (herring) & began salmon on last line of last skate
Halibut 5 (3 of them on salmon) = 173 lbs dressed
Dog fish 3
Skates 3 (1 was small male
2 orange stars 2
wood tube 1 on Rocks.

Caught our own mutton
" " tied to whistle

Water bottle at 3.5 p.m. L. 45.6 R. 45.1

53
5
2 | 265
142

July 27 Sett dogs
Sett whistle 9.58 a.m Course S.W.
Set gear 12.15 due west of N.W. Seal Rocks.
(Area Bay E. S.E)
(Yaquina Lt. N.E x E)
⑦ XIX
3 hand lines caught 1 halibut
Set 2 skates mixed salt herring and octopus bait
Rocks 4
Water sample at 2.20 p.m. 30 fms
L. 46 R. 45.8
Gear hauled at 2.40 p.m.
Rocks 4 (raved) one halibut jigged from buoy on Rocks.
Halibut 35 (all small but 1 med 1 large)
(3 known to be caught on dark fish)
Dog fish 13 (2 very large)
Skate 1
herring eel 1
star fish 1 (had 13 rays)
one salmon took Rocks on hand line but managed to get off again.

36
26
216
72
2 | 936
468

July 28 Left dock 8.30 a.m.
10.00 finish setting gear.
35 fms gy sand
on side end of gear
33 fms same bot side end of gear

Water bottle L. 45.9 R. 45.5.

1 skate (windy day)
bait ling cod, fish salmon adult
herring mixed

star fish (2 ragged) 4 on salmon bait

halibut 17 (on salmon bait)
1 (on ling cod bait)

cycle	1
skates (large)	2
ling cod	3
dog fish	4

quite a bit of salmon bait came back showed not to either be low start of else scarcity of fish.

12½ lb dressed salmon = 70 baits.

26
18
228
468

July 29 foggy (Sea dog bright in 29 fish)

(did a lot of protecting.

July 30 foggy. Raining came in hilly

17,000 lbs halibut took five days to pick up. 3 dories 8 skates each.
(best day = 11,000 lbs made on herring bait
at other time made 19,000 in 3 days.

Yacht keeps dressed fish sold

July 14	257	13.15
20	401	21.20
23	937	32.05
24	478	23.90
26	519	25.80
	−122	
	114	

1 day = 30,000
11,000
19,000 2 days
10,000
11,000

Visited Oyster beds.
of
Mr. King, :-

Car load (Nov. 1913) dug up.
7 acres private land.
Long thin crooked shell (dead screening, stat)

125 per cent broke out 178 bbls on Portstatt

Sower flat 2-3 bbls, didn't do well

Yaquina Bay Oyster Co.
J. H. Mills Co

Car load eastern in 1896-

Native shells are dumped to beds eastern shells are for keep grease native in prying loose from shell.

Sower buyer 1 carload Eastern

Spat grew 3 inches in one year.

Close Season 15 Jan - 5 Sept. Old buyer left it with oysterman here law takes it away.

Eastern oyster is glassy all
Jack and Yaquina beneath.

Some Jacks all dead
Some all covered still growing.
Also a 3d kind of Jack
Eastern 7 years old, 3 acres
Native 4 acres.

Van Boone
Bay 16,000 pr car load covers 2 acres.
Seared slough from Yaquina.
Very Boon drought shells under
old layer on shore.
White Elbert success.

Aug 4 (9.) XXI

Very windy day choppy. Ran out [illegible] min from [illegible] course — Gear down at 1.45 up at 3.00 Bait salt herring liners, fresh salmon wiped

Pennatulid	30	Halibut 5 (one taken by
Skate	11	
Sole	2	due west of ~~light~~ ber 3 at 4.
~~Skate~~ fish (20 nage)	2	

Sea Hog brought in 8 fish

Dressed 120 lbs

August 6 (10) XXII

Left at 9.30 for scallop ground
Sound 11.00 sand 35 fms.
Gear down at 10.30 sounded as under above
Scallop haul over at 10.45 towed 3/4 hour 1 star fish + worm tubes in net.
45 Sounded at 12.30 in 42 fms after running out for light 6 miles E & S.
Scallop haul over again towed for hour off bottom, jelly fish, pagurids
40
Scallop haul over again at 1.40 towed 20 min stopping headway & hoist at intervals to look for scallops 1=3 inch 2 [illegible] 1=7 inch
20 1 star, algae and worm tubes encrusted with eggs, saved

Hauled gear at 2:30
Bait shiners small and salt herring.

Halibut 18 (two broken by herring)
(two were jigged also)

Skates 8
Star fish (20 aged) 6
Rat fish 1
White sea anemone 1

396

Noticed numerous "bone banks" swimming around flanked by clouds of mite. Were feeding largest about 20" long.

Aug 7 Very heavy [illegible] day and did not go out

August 6 Hove to for 5 days fishing, came in with 16,000 lbs.

Fished outside of 50 fm. ridge took 1,500 lbs on 4 skates in one day the other days did not draw well.
Fished off light near Nauset.
Began Sunday August 2.

Rainy most of the last trip of 5 days
Monday August 3, returned August 7

Fished Sue. Wed. Thurs. brought in 15,000 lbs

With good string of trawl we could have fished with 6-7 thousand

August 7 Very very foggy one of our foggy days

Rainy Aug 7 (set 11 miles S.W. Sigler) came in with 4,500

Aug 14 Sept. 9.30 Hazy overcast

(11)
XXIII

Set one skate gear at 11.30
fresh herring bait
Nantucket Sigler E½S; 5 miles

Scallop Trawl over at 11.45 call 40 m. n low
" hauled at 1.45 p.m.

Hauled gear at 2.00 p.m.
Fresh herring and salmon bait.

Halibut	38
Barndoors	8
Skates	15
Sting cod	1
Red cod	2
Hog fish	1

Spoke the America, fishing set at 1,300, 3 skates gear.
Had frozen herring bait.

Crabbed brought in about 1,500 lbs
hand line

Soundings
(Newport, Ore.)

1	1	July	13	— 3.30 p.m. SET.	
2	2	"	14	— bot. 4 miles off, West of Foulweather.	
3a	3	"	20	— first set 25 fms	first sounding
3b	4	"	"	9.15 a.m.	second sounding.
4	5	"	21	44 fms.	inshore end sounding.
	6	"	"	bottom near small skate of gear.	
5	7	"	24	10:45 a.m. 43 fms.	
6	8	"	25	45½ fms, crs. gy. S., 2.05 p.m.	
	9	"	27	11.20 a.m. 44 fms	
	10	"	"	11.25 " "	
	11	"	"	11.35 " "	
	12	"	"	11.45 " "	
	13	"	"	12.05 p.m. 30 fms	
	14	"	"	12.10 " " rky.	
7	15	"	"	12.15 " 40 fms "	inside end of gear.
	16	"	"	12.35 " 35 fms "	outside end of gear
	17	Aug	15	10.00 am. 48 fms.	
	18	"	"	10.15 " 40 "	
	19	"	"	10.25 " 42 fms hrd. bot.	
		after running back from (10.15 sta. 18, 5 min)			
	20	Aug	15	10.35 50 fms	running in still further
	21	"	"	10.45 40 fms.	
		running out again after 10.35 sta. 20 and South.			
	22	Aug	15	10.55 37 fms	clean lead hrd. bot.
		running more S.W.			
12	23	Aug	15	11.00 a.m. 35 fms	gear over @ 11.10 a.m.
		running little to S.W.			
	24	Aug	16	12.25 p.m. 50 fms.	
	25	"	"	12.30 " 45 "	Due West from sta #24.
	26	"	"	12.40 " 40 "	Still due West. hrd. gravel bot.
	27	"	"	12.45 " 39 "	Still on a westerly course
	28	"	"	12.53 " " "	Course W x N.
	29	"	"	1.08 " 45 fms	from sta #28 Course N.E x N to Light
	30	"	"	1.13 " 45 fms	sand as before
13				gear over at same time. 1.30	
	31	Aug	16	1.15 " 47 fms.	Course NE x E.

Cont'd page 139

10.58 – 11.20 = 9 60 | 9.50 | 3.16 | 6 12 | 3 —

Aug 15 Rocky Bottom SW x S; 1½ hrs from whistle buoy

12 Left buoy at 8.40

XXIV

Set 1 skate gear at 11.10 fresh salmon. Put oyster dredge over hauled at one boulder 18 x 8 inches very solid + heavy.

2 Rocks

Gear hauled at 2.40 p.m. (2 homegranted rocks brought up full of life)

Halibut 27 (1 very large disgorged partially digested salmon.

Red fish 15 (one disgorged shrimp apparently floated away in water)

Ratfish 2

Starfish (20 rayed) 1

Sting rod 3

Skate 2

Dog fish 17

27 / 24 / 108 / 54 / 648

Several free swimming crustacean picked up over side.

Sea dog took 1,100 lbs.

Herring took 10,000

Aug 16 (13) XXIV XXV

Sept dock 10.50
Heftone S.W. from old life saving station

Sounded at 12.25 ran due east
sounded again at 12.35 etc.

Set gear at 1.30 hauled at 3.30

Halibut 8 +1 on hand line
Dogfish 28

Red cod 1
Sole 1 +1 very small one

Blue sharks 1 large one
Skate 1
Starfish (20 rayed) 1

Cr. end of set Yaquina Sr. N.E x N
12 miles from Bar
12-13 from Sight?

Aug 16 Spoke the Decorah. (Sr. N.E 9-10 miles
rather the latter
took 11,000 lbs.

Aug 16 Spoke the America Aug 16 Sight E, N.E
7 miles
13 - 15,000 lbs.
Clear aimed
(on Aug 15 took 11,000 lbs.
Sea dog took 1,400.

Aug 17 (14) XXVI

Sept outside at 9.58
Course S.W. x S

Sounded at 11.05

Set gear at 12.30 { Salmon bait
Hauled at 2.55 p.m. { 1 skate

Halibut 28

Dogfish 2
Red fish 13

One very large skate (4½ ft) and 3 others
Red sea anemone 2

Hand line (3) took 1 halibut
1 blue shark
1 dog fish
1 red fish.

XXVI

(32)	Aug 17	11.05 a.m.	40 fms.	
(33)	"	11.20 "	42 "	same course
(34)	"	11.30 "	42 "	" "
(35)	"	11.40 "	30 "	change course after sta #34 to due West.
(36)	"	11.45 "	34 "	clean lead, hrd. bot.
(37)	"	11.50 "	32 "	
(38)	"	11.55 "	30 "	course still due West.
(39)	"	12.03 p.m.	30 "	
(40)	"	12.10 "	30 "	rock.
(41)	"	12.20 "	35 "	clean lead hrd. bot. set here.

sounded ↑ after running N.E. from sta #40.

(14) (42) Aug. 17. ——— 35 fms inside end of gear.

3rd Trip, Halibut Survey
Aug. 30 - Sept. 5, 1914

Aug 29 ① H5620. 74 fms. clean bead.

② 5621 11.55 a.m. 65 fms. blk. S. fne G.

③ 5622 55 fms gy. S.

④ 5623 45 fms. fne sand.

⑤ 5624 1.20 p.m. 36 fms. fne. gy. S.
2 hr. double banked set 2 skates fresh salmon.
1:40 p.m. water bottle to 60 meters L. 47 R. 46.5
bottle accidentally tripped one minute after lowering.
Very foggy could see barely 3 miles after much.
Fishermen reported lot of shine on banks.
Saw 6-10 whales
Storm (by Mahoney)

Aug 30 ① 5625 39 fms. fne. gy. S.
② 5626 45 " " " "
③ 5627 44 " fne. gy. S. & blk. S.
④ 5628 47 " " " " "
⑤ 5629 56 " " " " "
⑥ 5630 57 " soap dropped out
⑦ 5631 59 fms. hrd. pan
⑧ 5632 65 fms. " "
2 hr. double banked set 2 skates salmon bait
bottle down to 110 meters
Slimy bottom as yesterday
⑨ 5633 30 fms. fne. gy. S.
⑩ 5634 45 fms " " "
⑪ 5635 48 " " " "
⑫ 5636 56 " " " "
⑬ 5637 60 " " " "
⑭ 5638 62 " " " "
⑮ 5639 66 " " " "

Aug 30	(16)	5640		63 fms	fne. gy. S.
	(17)	5641		78 "	" " "
	(18)	5642		52 "	hrd. pan.
	(19)	5643		46 "	good, blk. G.
	(20)	5644		38 "	hrd. mud.
	(21)	5645		42 "	coarse G.
	(22)	5646		38 "	rky
	(23)	5647		34 "	—

fne gy S is overlaid with slimy mud (string of it came up on every set even over hard pan bottom.

Aug 31	(1)	5648	5.21 a.m.	28 fms.	fne. gy. S.
	(2)	5649	5.37 "	38 "	" " "
	(3)	5650	5.46 "	47 "	" " "

2 hr. double banked set, 2 skates mixed salt herring + fresh salmon, slimy bottom.

	(4)	5651	9.20 a.m.	58 fms.	fne gy. S.
	(5)	5652		71 "	" " "
	(6)	5653		55 "	fne gy S & gn. M.
	(7)	5654		" "	" " " " "
	(8)	5655		51 "	gn. M.
	(9)	5656		" "	"
	(10)	5657	12.00 noon.	53 "	"
	(11)	5658	12.26 p.m	54 "	"
	(12)	5659		55 "	"
	(13)	5660		" "	M? clean lead.
	(14)	5661		48 "	gy. S.
	(15)	5662		47 "	"
	(16)	5663		42 "	"

2 hr.
Set: double-banked, 2 skates, salmon, set SxW from (16)
Water bottle 70 meters L. 46 - R. 46.2
Lower end pretty good bottom
Bunch gor jumpbin.

	(17)	5664		41 fms.	gy. S.
	(18)	5665		35 "	" "

Aug 31	(19)	5666		33 fms.	gy. S.
	(20)	5667		31 "	

Sept. 1	(1)	5668		56 fms.	hrd gn. mud
	(2)	5669		52 "	shale
	(3)	5670		55 "	"
	(4)	5671		65 "	"
	(5)	5672		83 "	rky
	(6)	73		114 "	blk. S.
	(7)	74		84 "	hrd pan.
	(8)	75		80 "	hrd. shale
	(9)	76		93 "	blk. S, G., shale
	(10)	77		131 "	blk. S.
	(11)	78		139 "	
	(12)	79		88 "	gravelly pretty good.
	(13)	80		71 "	rky 1 small brittle star.
	(14)	81		82 "	blk. S, G.

2hr set, 2 skates, double banked. L. 46.8 R. 46.5
E. S. - 48 lbs. male very large testes.

(15)	5682		83 fms.	hrd. gr. mud.
(16)	3		80 fms	hrd. gr. M, little blk. S.
(17)	4		68 "	brk. hrd. pan.
(18)	5		71 "	rky., little blk. S.
(19)	6		77 "	" " " "
(20)	7		80 "	hrd. mud, G.
(21)	8		92 "	
(22)	9		87 "	

between (20) and (21) 2 skates, 2 hrs, salmon, double banked.

(23)	5690		82 fms.	blk. S.
(24)	1		62 "	hrd pan, blk. S.
(25)	2		55 "	rky., Co.
(26)	3		51 "	rky., little blk. S.
(27)	4		54 "	shale
(28)	5		47 "	G.
(29)	6		44 "	shale, G.

Sept. 1	(30)	5697	43 fms.	crs G.(P.), blk. S.
	(31)	8	36 "	rky. Co.
	(32)	9	47 "	gy. S.
Sept. 2.	(1)	5700	39 fms.	gy. S.
	(2)	1	40 "	" "
	(3)	2	33 "	hrd (gn. M) clay, shale.
	(4)	3	43 "	crs. gy. S.
	(5)	4	61 "	G. (P.?)
	(6)	5	67 "	ascidian on lead.
	(7)	6	63 "	blk. crs. S., fne G.

between (5) and (4); 2hr. double banked, 2skates, salmon.

	(8)	5707	44 "	shale & G.
	(9)	5708	40 "	G. + one shell.
	(10)	5709	42 "	G. brown worm
	(11)	5710	42 "	shale, S., one small
	(12)	5711	42 "	gy. S.
	(13)	5712	42 "	gy. S.

P Note: Night of Sept. 1 — 11 fish boats sighted, lights counted
Sept 2. 1 6 dory boat, Liberty? fishing,
9¾ miles S 14 W (mag) of Yaq LT.
2 3 dory boat Daisy S.W. (mag) " " "
3 9 miles N. 61 E To LT.

	(14)	5713	29 fms.	gy. S.
	(15)	" 14	33 "	" "

oyter dredge Towed 20 min. dist. 0.7 miles direct. S½E (true)

(16)	5715	42 fms	
	beam Trawl, Towed 20 min, 1 mile, S (true)		120 fms out.
(17)	5716	39 fms	
	beam Trawl 20 min		170 fms out.
(18)	5717		
	oyter dredge 20 min		100 fms out.

Sept 2	(19)	5718	33 fms	
		oyster dredge		120 fms out.
Sept. 3	(1)	5719	39 fms.	gy. S.
	(2)	20	40 "	" "
	(3)	21	38 "	" "
	(4)	22	42 "	" "
	(5)	23	43 "	" "
	(6)	24	45 "	hrd clay.
	(7)	25	48 "	gy. S.
	(8)	26	50 "	fne. gy. S.
	(9)	27	65 "	
	(10)	28	53 "	" " "
	(11)	29	35 "	" " "
	(12)	30	43 "	gy. S.
	(13)	31	45 "	" " 1 set.
	(14)	32	50 "	
	(15)	33	32 "	
	(16)	34	30 "	
	(17)	35	42 "	gy S., blk. Sp.
	(18)	36	70 "	gn. S.
	(19)	37	77 "	gn. M.
Sept. 4.	(1)	5738	47 fms.	fne. gy. S.
	(2)	39	43 "	gn. S.
	(3)	40	44 "	gy. S.
	(4)	41	44 "	gy. S.
	(5)	42	43 "	fne. gy. S.
	(6)	43	43 "	dk. gy. S. set.
	(7)	~~44~~	38 "	fne. gy. S.
	(8)	45	32 "	gy. S.
	(9)	46	40 "	fne. gy (blk) S.
	(10)	47	43 "	" " " "
	(11)	48	43 "	
	(12)	49	45 "	coarser than preceding
	(13)	50	54 "	coarse. gy. S.

5:44 a.m.

Sept. 4 (14) 5751 56 fms. S.T., sand, barren bottom.
Columbia river sweeps down over this bottom covers everything with silt or else sweeps it clean, or else fresh water kills life.
(15) 5752 44 fms. fne. gy. S. very little on lead.
(16) 53 40 " gy. S.
(17) 54 42 "
(18) 55 41 " lost lead
(19) 56 36 "

Sept. 5 (1) 5757 27 fms. fne gy-S.
(2) 58 36 "
(3) 59 44 " little gy-S. otherwise lead clean.
Saw Two whales.
(4) 5760 46 fms. soft bot. no impression on soap.
(5) 61 57 " gn. mud.
(6) 62 63 " " "
(7) 63 67 " " "
(8) 64 71 " " "
(9) 65 65 "
(10) 66 60 " gn. mud.
Saw 2-3 whales
(11) 5767 55 fms. gn. mud.
(12) 68 50 "
(13) 69 44 "
(14) 70 40 " P&G. good bot.
(15) 71 38 " fne. G. " " Set.
(16) ~~72~~ 69 " gn. mud.
(17) 73 73 " shale (rky?)
(18) 74 74 "

Sept. 1 ascidians (salps) on lead all day long.
See whales each day.
Aug. 30, 3♀ +1♂ in ice Sept. 1, 1♂ in ice.

Sept. 1. — night, 11 ~~boats~~ (lights counted?)
Sept. 2. 1-6 dory boat Liberty 9 3/4 miles S14W mag. of Lt.
2-3 " " Daisy 5 1/4 " S.W. mag. of Lt.
3- 9 " N.61E " " "

Sept. 3 ~~4~~ Alaska on ridge 80,000
Decorah off Alsea River on ridge, 6 days 10,000.
Decorah fished near where we saw San Juan took, 4,000.
→ Saw San Juan between Sta. 7 & 8 headed S.

Scallops from first haul 4 live in shell = 1 lb.
4 meats (eyes) = 1/4 lb.

Outside set near Tillamook had little slime on bottom.

H. 5689, rich bottom = cup-sponge, should carry halibut.

Aug 29 6-9 whales sighted some at least 30 feet from tip to tip of tail.
H 5632 Set, slimy bottom as day before.
Aug 30, one large ♀ 90 lbs nearly ripe? ovaries broke on being extracted. saved.
H. 5663, Set., lower end had pretty good bottom Burke took a pumpkin (large sea anemone)

Saw "whaler" on last days fishing Sept. 5,

Aug 29 H. 5620 Saw about 1/2 doz large whales.

Capt. Quin Idaho
capt. Johansen, Chicago
Capt. Odsen, Stan
Capt. Edwards Heading Bros.

H 5632 Aug 30 - 14 90 lbs. ♀
Eggs from halibut
↑ 1 ovary no label →

July 21 - 14 85 lbs?
nearly ripe eggs
day of 130 lbs halibut